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Ex-boss Levy to be sued for $2.5m

by George Black

RAJ THOMAS, chairmon of Altergo, the top British software house which called in the receiver last week, will sue managing director Leonard Levy who left the firm days before the disaster.

Thomas, who hired the American financiet just three months earlier, said he would start legal proceedings to get the $2.5 million promised to Altergo, as well as probably seeking damages against Levy.

"I do feel Altergo would have survived and thrived if it had got the financial stability Levy promised," said Thomas.

Visibly distraught after the tragedy of the collapse, he said he had been willing to slip into the background as Levy wanted.

"It would have been irresponsible to let the staff down for the sake of my own position."

But Levy had not come up with the money. He had represented himself as an extremely rich man and when Barclays Bank refused to accept his Californian land as collateral asserted that he had many other assets.

"About 30 times he told me he would solve the problem. I was getting extraordinarily nervous, but he expressed absolute confidence," said Thomas.

Levy had done a lot of necessary things at the start, but his actions were getting "more and more questionable".

"At the end of the day I have to take responsibility – but I had to do something and he seemed like our last chance."

City institutions had been unwilling to lend while lawsuits with Insac remained unsettled. These were resolved last December. He had known Levy for 11 years and had believed him to be a man with large disposable income – though now he is not so sure.

The American had provided glowing references from stockbrokers. It came as "a bolt out of the blue" when they found they had only five days to get alternative finance after Levy's shock exit. "It was an utter nightmare. It's a shame it should end like this when order books have never been fatter."

If Levy had kept his word the firm could have been put on a footing to get bank help or go public this year.

Receivers Ipe Jacob and Maurice Whistall of accountants Thornton Baker this week considered 80 bids. They included one from Altergo business systems managers, who left to form the rival Bluebird Software, to take over their old firm. Others included Telecomputing and Data Logic.

Thomas blamed the bank which refused to raise the overdraft above £600,000, for failing to see software as a long-term and capital-intensive investment. Altergo owes £1.2 million, IBM being among its creditors.

THOMAS and LEVY . . . Former friends going to court.

Japanese decide on challenge to Trilogy

by Kevin Cahill

JAPANESE computer manufacturers have set their sights on Dr Gene Amdahl's Trilogy computer family – which is only two years away from delivery.

Under the title of the Supercomputer project, Fujitsu, Hitachi, NEC and the National Telephone and Telegraph company are working on a new, very high speed serial processor.

According to the management of the Supercomputer project, the new machine will have an internal arithmetic functioning speed of 50 million instructions per second and should be ready for delivery by 1986, a year after Dr Amdahl's IBM compatible Trilogy machine is due on the market.

Although the Supercomputer project was started separately from the fifth generation project, there is a close liaison between the two teams. The fifth generation system requires a very fast serial processor, in addition to the predominantly parallel and data flow architecture of which it will be built.

The Supercomputer project has escaped the limelight for some time, partly because at least two of the companies Fujitsu and Hitachi, have been developing similar machines as a matter of normal competitive product development.

It is not clear why the Supercomputer project has suddenly been targeted on the Trilogy machine rather than the more traditional marketplace norm of IBM. Executives responsible for the project simply say that the bench mark has been changed. By implication, the real competition in 1985/86 is going to come from Trilogy and not, as was traditionally the case, IBM.

Trilogy's Amdahl

Fujitsu's position in the project is also somewhat ambiguous as that company owns 30% of Amdahl Corporation in the US, which itself is involved in the development of a successor to the current 580/60 machine, which will logically compete directly with the Trilogy machine.

Amdahl Corp has given no details of the next machine, but acknowledged that work on it had begun in June last year.

The Trilogy machine will be based on a silicon wafer 3cm by 3cm, which will be water-cooled and implemented in bi-polar emitter couple logic.

The move to water cooling by Dr Amdahl has taken some commentators by surprise, since he was the pioneer of the air-cooled concept.

Dr Amdahl says that water cooling is the only way forward now given the speed and power required to be competitive in the next round of the computer game.

The current Hitachi and Fujitsu machines are air cooled, as is the Amdahl Corp's 580/60, but all three companies owe a huge design debt to Dr Amdahl, who founded Amdahl Corp after he resigned from IBM following the launch of the 360 series of which he was the architect.

So far Trilogy project has raised $163 million in the form of cash, leases and direct investment, and the company expects to spend as much again to get the machine into commercial production.

DES clobbers technical universities

by John Riley

THE new, technical universities have been clobbered yet again in this year's allocation of the Department of Education and Sciences three year, £100 million programme to back information technology and "new blood" lectureships. Among the worst hit universities in the announcements being made this week, are Stirling, Salford, and City, with several others expressing disappointment and bewilderment.

Some 70 permanent lectureships have been created specifically to further information technology.

A further 242 "new blood" lectureships, for academics under 36 years old, have been set up to redress the unsatisfactory age profile in the universities, and include a few computer related posts.

Despite a new externally funded chair in information technology and the £40 million Wang manufacturing plant on the campus, Stirling received no IT backing.

Professor Duncan Timms, vice-principal of the university said: "We find it inexplicable. We are strong in the information systems area, particularly for business management."

The University Grants Committee, together with the Science and Engineering Research Council, adminstering the DES cash, invited universities to tender for the posts earlier this year.

Brian Oakley, secretary of the SERC said: "We concentrated support where we believed it would do most good, and against the background of the Alvey report recommending centres of excellence for information technology in the country."

IBM users in the cold

■ From page 1

software like CICS, IMS and VTAM have cluttered it up, limiting some users to as little as four Mbytes of addressable space.

The main change in Extended Architecture is that it replaces 24-bit addressing with 31-bit addressing, thus creating more space for the juice-hungry applications such as artificial intelligence programs, graphics, and data manipulation. The addressable space now available reaches up to 2,048Mbytes (two gigabytes). Although IBM says no additional storage is needed to run XA, the bad news is that the new release costs twice as much as the SP1.3 licence.

The mushrooming growth of many DP shops forced IBM to bring out MVS/XA in what some users consider to be the mid-point of its design. Presentations by eight experimental MVS/XA users at the Share IBM User Group last month confirmed that the main need – that of adding more devices to the system and freeing user space – were coped with by XA quite smoothly, but these are really the only advantages to be gained at present.

Without a VM or a 4300 implementation – rumoured to be on its way – MVS/XA is only supporting a few functions, of benefit only to the larger users who need more user space. As expected there is little change in performance and throughput with IBM repeating benchmarks of +6% to −7%, although IBM stresses that improved channel utilisation can boost performance.

US go-ahead for teletext

by Howard Karten

THE Federal Communications Commission (FCC) last week authorised the broadcast of teletext material over US television channels. But the commission declined to specify a standard for broadcast, preferring instead to leave selection of a standard to the open marketplace.

Such a move will undoubtedly impede commercial development, as broadcasters, hardware manufacturers and consumers wait to see which will become the defacto standard.

Notwithstanding this potential confusion, CBS, one of the country's three largest commercial broadcasting networks, began broadcasting teletext within days of the commission's approval.

The CBS system, called Extravision, is using the AT&T-backed technology, which is also supported by Time Inc., and NBC, another giant communications network.

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Toshiba first with 'one on a desk'

by Kevin Cahill

THE first working "one on a desk" combined phone, text and micro message system was shown at the Hanover Fair by Japanese manufacturer Toshiba.

The device, which the company called an Integrated Communication System (ICS) consists of a telephone, key pad dialling system, video screen and microcomputer based key board.

The three units are combined to produce a device which can transmit voice and data simultaneously, store and forward electronic mail and collect incoming mail in an electonic letter box.

In addition the device can be used to transmit integrated graph-based data.

Toshiba said the ICS device would be the centrepiece of the company's office automation system, which is more advanced than many Western observers are aware.

In the Toshiba showroom at Japan's office automation centre in Shinjuku near Tokyo the company has an integrated minicomputer/facsimile/printer and communications system all on one desk on show and for sale at around 13 million yen (about £35,000). The company gave no price with the Hanover machine but Japanese commentators say that the company has set itself a target of between $1,000 and $3,000 in the shops.

According to Toshiba the device when marketed will be able to carry 32 direct lines and up to 120 extensions, with automatic call-back, call transfer, teleconferencing and a handfree speaker phone to use while keying data.

The unit can pick up and store two hours worth of voice input messages and will accept messages for automatic transmission to up to 100 locations.

By actually introducing the device this year Toshiba has upstaged ICL, which plans to introduce a similar sounding product in combination with Clive Sinclair later this year or early next year.

The only reason Toshiba appears to be showing any reluctance to market the product is a probably unjustified fear that the ICS might develop a separate market from the "integrated desk" with which the company eventually wants to introduce the device.

BRACKENBURY . . . "Someone has to stand up to them"

OEM threat may see DEC in EEC court

by John Kavanagh

UK SYSTEMS houses are preparing to go to the EEC with claims of restraint of trade against US minicomputer giant Digital Equipment (DEC).

The move comes as the small systems company Darkcrest finalises its case against DEC before taking it to the High Court next week to force the company to prove its software piracy allegations. And if DEC fails, Darkcrest will be looking for exemplary damages of £10 million.

Meanwhile systems houses are examining the potential impact of DEC's new guaranteed uptime feature in its maintenance contracts. The feature is seen as weakening DEC's competitors in the end user market – its own systems houses – by depriving them of maintenance revenues.

"A group of third-party companies has put together several thousand pages of concise information on DEC's restraint of trade," said Darkcrest managing director Nick Brackenbury. "Money has been spent on this on both sides of the Atlantic. Someone has to stand up to them."

Brackenbury said DEC had failed to back up its software piracy claims, made last summer. Last July DEC went to the High Court to get an order allowing it to search Darkcrest's premises for evidence. Since then both companies have said they would pursue the case to the end.

Darkcrest has always denied the charges. Last autumn it said it had the backing of other UK systems houses but they were afraid to put their views in writing. But DEC's UK managing director Darryl Barbe has said Darkcrest has not followed the software licensing rules in the same way as other firms.

"We keep asking them to substantiate their claims but they just keep putting us off," Brackenbury said. "Our reputation is at stake. So we applied to the court for a ruling on whether their original claim was falsely made. And they're now going round our customers trying to get information against us.

"We believe they are motivated in this by competitive business considerations and not by concerns about software piracy.

"It looks as if we are the trial case; they have accused others."

Brackenbury said he was "utterly astonished" that the government was backing DEC with projects such as its new software development centre. "The government is backing a US company which is using such tactics against a UK firm," he said.

DEC had no comment.

IBM makes plans for Unix

IBM PLANS to support the Unix multi-user operating system on its Series 1 machines, 4300 mainframes and the personal computer, industry delegates at the Hanover trade fair learned.

It is understood IBM is to offer its Unix version – probably a development in line with Microsoft and Logica's Xenix system – as an alternative to the standard MS-DOS. The report is confirmed in a Venture marketing organisation survey and the software should be available this year.

Lasers go out

BURROUGHS has dropped its laser storage system after five years and $20 million of development. High production cost is given as the reason for the decision not to go ahead with manufacture, but reports from the US suggest that Burroughs was forced to shelve laser storage because it had no controller for the device.

Burroughs denies that the lack of a controller lay behind the action.

BASF user group

BASF USERS in the UK have formed their own user group, the BCUA. Initial membership will be 14 and the association hopes to attract members from Europe. Chairman of the association is Brian Crowe, data processing manager of Norman Frizzell Motor and General.

Hoskyns sales up

HOSKYNS Group Limited, the UK computer services and information technology company, had sales of £26.5 million in 1982, compared to £21.4 million in 1981. This is an increase of 24%, the company's sixth consecutive year of record revenue.

Artificial intelligence to go on sale

by Kevin Cahill

THE world's first commercially available artificial intelligence system, recently demonstrated by Nixdorf Computers, will be offered to the marketplace early next year.

The system, which hasn't acquired a name yet, uses an inference engine designed by UK expatriate Stuart Savory, to apply the knowledge in a knowledge base to problems in specific areas of expertise.

The two applications on show at the Hanover Fair used the Expert System to help diagnose the cause of faults in a Volkswagen Golf, and to optimise a CPU and peripheral configuration for a Nixdorf 886X computer system.

According to Savory, Nixdorf's head of artificial development, the only way to overcome the shortage of expertise in the world is to have multiple copies of experts. His method of achieving the non-biological multiplication of experts is to incorporate their knowledge, not their store of data, into a specially constructed knowledge base.

Using a Z80-based Nixdorf microcomputer and a rule based inference mechanism implemented in Pascal software, Savory has achieved something of a breakthrough in terms of an economic and functioning system. His only problem is to so develop the system that it can't be used to develop better versions of itself, thereby injuring its prospects.

NIXDORF . . . first.

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UK fledgling is taken under wing

by Robert Parry

THREE-month-old UK computer systems distributor Gulfstream Technology has been bought by Canadian venture capital group Bytec Management Corporation.

The all-share deal transforms Gulfstream into Bytec's European subsidiary — the first outside North America.

It was Gulfstream's bid for UK distribution rights in the Canadian-built Hyperion portable IBM-compatible microcomputer thst set the deal going. Hyperion is built by Dynalogic Info-Tech, which is part-owned by Bytec.

"We were looking for a substantial backer," says George Macfarlane, Gulfstream group managing director, "but never dreamed that the 20-strong company would be snapped up so quickly. Bytec made us an offer we simply could not refuse."

For Macfarlane, the unrefusable offer was a swap for his 250,000 Gulfstream shares — two thirds of the stock — for an undisclosed number of Bytec shares and elevation to Bytec vice president for European operations. For the company it brings an immediate £125,000 from Bytec, and commitment to future financing.

"With Gulfstream as a 100% owned subsidiary, Bytec will be totally responsible for the finance it needs," says Bytec business development director Ross Tuddenham. "It gives us the chance to put more in to support the European market through a European subsidiary, rather than by dealing from Canada."

Bytec was formed in 1979 by Mitel president Michael Cowpland and Glen St John. It manages a portfolio of companies worth over $60 million. The Hyperion portable micro from Dynalogic represents a large part of its business — Tuddenham reckons $10 million worth a month will be shipped by August — and as a prelude to Bytec seeking a public offering will soon bear a Bytec badge.

Macfarlane predicts that Gulfstream — or Bytec, if potential name clashes with microsystems dealer Bytech in Reading are avoided — will ship 1,000 Hyperions this year, a modest 1% of his predicted UK market for computers between £2,000 and £4,000.

"Just two potential customers, a large corporation seeking machines to give to each of a 100 or so financial controllers and a bureau considering buying 400 as access to its mainframes, would make up half that number," he says.

Gulfstream Computer Products now has exclusive UK rights for the Hyperion as well as a range of intelligent terminals from Liberty Electronics. It will be adding another micro soon, probably the Pied Piper from another Canadian company 25% owned by Bytec, Semitech Electronics. This will sell for under £800, and be "very portable" says Macfarlane.

Its sister company, Gulfstream Computer Systems, provides turnkey business computers.

McFARLANE . . . was made an offer he couldn't refuse.

The Week in Parliament

Whitelaw is warned about Protection

RADICAL amendments will have to be made during the committee and report stages of the Data Protection Bill, or both the Labour and Liberal parties would vote against the third reading, Home Secretary William Whitelaw was warned last week.

The warnings were delivered by Roy Hattersley, Opposition spokesman for Home Affairs, and Simon Hughes, the new Liberal MP for Bermondsey, during a Second Reading debate when MPs returned from the Easter recess.

Hattersley said the Opposition would not vote against the Second Reading because the Bill did at least establish the principle that the private citizen had a right to know what information about him or her was being held by private agencies or companies.

Hattersley said the Opposition believed the Bill had major flaws. He deeply regretted the absence of arrangements to give protection against the misuse of manually stored records.

Whitelaw was also sharply criticised for the alleged sweeping nature of exemptions.

Whitelaw claimed that exemptions were being kept to a minimum. Apart from data held for domestic and certain other very limited purposes, the only data wholly outside the provision of the scheme was that dealing with national security issues.

All other data, including that held by police for crime prevention, would be registered and accessible by the registrar. But access could not be given to all police records if this jeopardised crime prevention.

Hattersley later described the Bill as being not so much an extension of civil liberties, but an Act to make the government's information technology programme possible. Until Europe sorted out its own convention for protecting individuals against organisations processing their data, UK computer companies would be denied access to information held by their European collaborators.

The government, said Hattersley, had chosen to do the least possible to bring Britain into line with Europe.

Inventors' bright ideas get a chance

by John Kavanagh

A CHANCE for bright ideas from universities and private inventors to see the commercial light of day is being offered by Barclays Bank and the National Exhibition Centre in the form of the UK's first technology transfer exhibition.

The move comes hard on the heels of a US study tour by senior Barclays manager Matthew Bullock, who called on big UK companies to consider the success of their US competitors in working with universities and small specialist firms rather than setting up massive research departments.

The show is expected to introduce these parties to each other and to sources of finance.

"There is no doubt about the crying need for some way for universities to get their developments to the market," said Barclays Techmart organiser Ernest Vincent. "This show will give them a much needed face-to-face rapport with industry."

Such shows have been held across Europe for several years. A Geneva show, now in its tenth year, gets 680 exhibitors, over 1,000 new products and ideas and 100,000 visitors.

Vincent said he would be very happy with 250 exhibitors at this first UK show. "We have test-marketed the show to 100 potential exhibitors and 75% were interested in taking stands," Vincent said.

"They included London's Imperial College, large and medium-sized companies and organisations right up to the Electricity Council."

Industry also seemed ready to consider university ideas. "We have visited companies like Plessey, Ferranti and BP and they all said very senior people would come," said Vincent.

The show will be at the National Exhibition Centre in Birmingham from February 21 to 25 next year. There will also be seminars on financing, developing and marketing new technology and inventions.

Advertising moans pour in

by Andrew Thomas

COMPUTER companies feature prominently in a new list of complaints prepared by the Advertising Standards Authority (ASA), with an average of one complaint a week for the last 12 months. And of the 51 cases reported to the ASA which fell within its remit, that is cases directly related to advertising claims rather than contractual wrangles, 22 were upheld.

Reasons for complaint ranged from mail order delays and non-availability of products to disputes over technical claims and compatibility with other equipment.

A spokesman for the ASA said that the number of complaints against computer firms did not reflect too badly on the companies concerned as the market was mushrooming at such a speed that there were bound to be gripes due to the sheer number of people responding to computer advertisements.

One of the commonest complaints was against claims that Basic was "just like plain English". The ASA came down on the side of the complainants in these cases, saying that although Basic was a simple language in computer terms, it was misleading to maintain that it bore much resemblence to English.

Sinclair Research came in for some stick over delivery delays and promises of the availability of the enigmatic Microdrive. Advertisements appearing in early 1982 claimed that the Microdrive would be available "later this year", but it has yet to appear.

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Semaphore gets computers talking

by Andrew Thomas

A MAJOR aid to systems interconnection made its first appearance last week. Semaphore, the product of Basingstoke-based Albetros, enables almost any computer to communicate with another for as little as £125 a machine.

Albetros started life in 1976 as a software consultancy, and managing director Peter Hills says it was during this period that the need for a simple, reliable link between different computers became apparent.

Semaphore provides that link in two ways: a piece of software running as an object program in each machine to be linked, and the Blue Box.

This not only enables minis and mainframes to talk to each other, but can turn a dumb terminal into an RJE station, or provide remote access to any RS232C-equipped peripheral for as little as £690.

The machine with which Semaphore can be used will eventually include most micros, minis and mainframes, says Albetros marketing manager Hugh Griffiths.

"Semaphore operates with any CP/M, CP/M-86 or MSDOS micro, and with DEC, Prime, Data General and IBM minis and mainframes," he says. "But if you want a version for any other machine, it will be ready in a matter of days rather than weeks."

The software is supplied ready compiled for each different machine, taking into account what Griffiths refers to as its "I/O file handling eccentricities", and is written in a mixture of Pascal, assembler and Fortran.

"Semaphore's unique, there's a huge market, and it's British," he says.

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Data Logic saves 135 Altergo jobs

by George Black and Robert Parry

ALTERGO Ltd and Altergo Business Systems have been rescued from receivership by Data Logic, ensuring jobs for about 135 of the staff.

Data Logic, the British systems house owned by the US electronics giant Raytheon, agreed with the receivers last week to buy two of the major Altergo assets.

Alan Thomas, Data Logic managing director, said: "We are delighted. We believe that we are now the leading IBM based software house in the UK." He added that Data Logic intended to keep the ex-Altergo staff together in the same groups "wherever possible."

Talks are continuing in this country and the US on the future of Altergo Software and £2 million worth of contracts in Saudi Arabia. Receivers Ipe Jacob and Maurice Whistall, of accountants Thornton Baker, are hopeful of disposing of it as a going concern this week and are keeping the 35 staff on the books.

Negotiations are also going on for Altergo Services Ltd and Altergo Europe Ltd. Meanwhile smaller parts of the empire not in receivership are being snapped up. Optim Computers bought the tiny Altergo Micro Systems Ltd and offered jobs to its half dozen employees.

Optim managing director Mike Burden said the Altergo subsidiary would fit in ideally with its own Ontel marketing operation.

Data Logic has 700 staff and last year had sales of around £25 million. It moved into IBM systems when it acquired the bureau part of Computer Resources last year.

A "crazy history of cross-litigation" between Inasc and Altergo lay at the root of the collapse, Altergo chairman Raj Thomas said.

■ The acquisition of the two Altergo operations gives it a bigger penetration in the IBM Systems 34 and 38 market, says Data Logic marketing director Mike Brinsford. "We had a big drive to recruit more IBM staff anyway," he adds. "Altergo had always been a good competitor; their technical strengths have never been in doubt."

Data Logic will keep the Altergo staff groups together under its Professional Services division, and will continue to use the Altergo name for those parts of its operation.

It will not take on any other bits of the Altergo empire, but is interested in a Middle East contract won by the Altergo subsidiaries but not included in Data Logic's buy.

The order, worth £1.8 million, is from Saudi Airlines. It and one for £1.25 million from United Arab Shipping Company, are to be sold off separately by the receivers.

THOMAS . . . . "Now the leading IBM based software house in the UK."

Mitel drops plan to build French exchanges

by John Kavanagh and Jack Gee

FRENCH private telephone exchange manufacturers were relieved last week that the Canadian firm Mitel had dropped plans to build exchanges in France. Mitel said because of the recession, world demand for private exchanges was not strong enough to justify building the factory.

This means European manufacture of Mitel products will be based on new factories in Wales and West Germany. The company's UK arm is thought to be talking to IBM about building a new range of "unique switching systems". The companies are working together on development in Canada.

The big French firms Thomson-CSF, CIT-Alcatel, Jeumont Schneider and Compagnie Generale de Constructions Telephoniques now hope to organise a counter-offensive against the US telephone exchange invasion.

Mitel does 25% of its business outside the US and Canada.

Software wholesaler opens up in UK

by Robert Parry

US SOFTWARE wholesaler Softsel Computer Products has moved into the UK. A warehouse in Feltham, backing on to Heathrow Airport, will house £1 million of software on disc and cassette, and be the centre for Europe, the Middle East and North Africa of Softsel's bulk purchase and reselling operation.

The warehouse will carry stocks of 1,800 software lines from about 150 suppliers, for sale to micro dealers. There will be no sales direct to end users. Products from the US are shipped in by air, for distribution with UK-sourced software to Europe.

Apart from being a one-stop shop giving dealer purchasers a wide variety of games, educational and business software for popular micros like the Apple II, IBM PC, the various Commodore machines and Texas Instruments' 99/4A, Softsel sets itself up as doing all the work for the dealers.

BLUMSTEIN . . . . "The UK has a great deal to offer for sale in US."

It has a product evaluation group which selects what software Softsel will handle, based on technical characteristics of the software and on forecasts of what will be a good seller at retail level. Packages can be ordered for a month's evaluation, and a best-sellers chart is produced as a guide. So far this is based on US sales, but a UK version will come out eventually.

Most of the lines carried so far are of US origin, and include well-known names like VisiCorp, Micropro, Microsoft and Peachtree. But the company is looking for UK products to sell here and in the US.

"We believe the UK has a great deal to offer for sale in the US," says UK managing director Herb Blumstein. "We want to develop that potential and will be setting up a product evaluation group here in the UK."

Having the Feltham operation in action should cut down the turnaround time for European customers from one or two weeks to one or two days, reckons Softsel president Bob Leff, and will save dealers from importing problems. It also means they will be able to buy in smaller quantities.

Compiler row settled

by Philip Hunter

A DISPUTE between York University and the British Technology Group (BTG) over ownership of one of the most advanced compilers for the controversial defence language Ada, has been settled. But York University is not completely happy with the settlement since it loses all marketing rights, and retains only academic control over the compiler, which runs on the Digital Equipment Vax minicomputer.

"I think I'd better not comment on it," says the university's Ian Pyle, who led the development team. "We've done it. I'm not going back on it."

The compiler was developed with the help of a BTG grant through SERC, the Science and Engineering Research Council. The dispute arose when it was realised that the compiler had much greater commercial potential than had been expected.

The BTG is about to launch the compiler in the US where a large market is expected since there are no other products that compare with it on the Vax. The US campaign will be strengthened if the compiler is successfully validated by the US Department of Defence, which sets world language standards through the American National Standards Institute, Ansi.

The first Ansi Ada standard was released in February, but no commercial compilers have yet passed the test. The York compiler is close to the Ansi standard, according to Ian Wand, a senior member of the development team. Like the US companies Rolm and Western Digital, which also have Ada compilers, York had tried to guess the Ansi standard during development.

FACE TO FACE WITH SYSTEK

"If I were in the market for another system I would go back to SYSTEK"

SYSTEK have been supplying Terry Dart, the Data Processing Officer (Administration) at the Imperial College of Science and Technology for four years. During that time he says he has rarely had cause for complaint about their equipment or service.

"Before that we suffered so much from lack of support from our previous supplier, you can't imagine. I have always found SYSTEK to be very helpful and cooperative, making certain that those people who can answer difficult questions are there when you want them. I've found the support I've needed from SYSTEK and on that basis I've recommended them to a number of other people.

Terry explained that the college wanted to make a move so that they could run two machines together, their existing DEC™ PDP 11/35 and a new PDP 11/34. It appeared that SYSTEK were the only company actually prepared to sit down and talk to them about it and do the initial work required.

"We were very pleased with the overall end result. Not only did they try hard to understand our particular problems, they came up with a very competitive price plus some impressive software solutions. And I have to admit I couldn't fault the original installation. When we installed a further new DEC™ PDP 11/44 we assumed it would be equally easy, but we had more than a few problems to solve. SYSTEK I'm glad to say got there quicker than most."

"If you're in the situation of only having a certain amount of money to spend, like most universities, it is possible to get a good price from someone then find they drop you in it. After my experience with SYSTEK it would be very difficult to think of going elsewhere, because quite simply they provide the kind of service I'm looking for."

"The sign of a good supplier," Terry concluded, "is that you'll go back to them. And I would certainly go back to SYSTEK."

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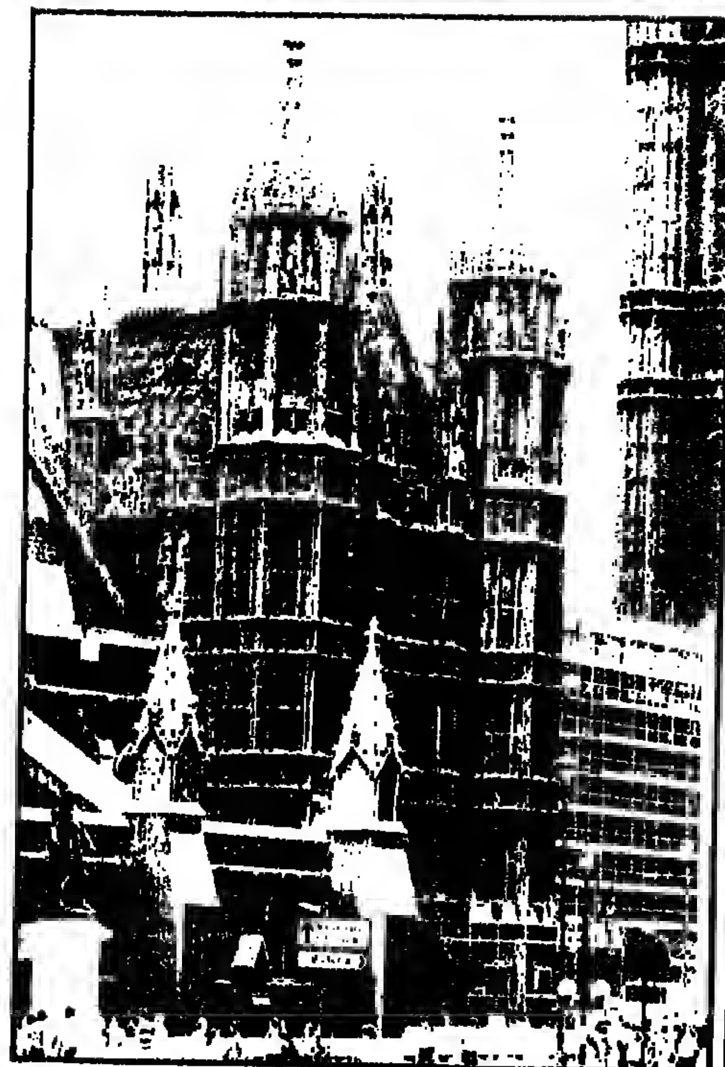

MPs could be closer to constituents thanks to computers.

Bank staff call halt to computers

by Andrew Thomas

BANK staff voted for a tougher stand over new technology last week – against the advice of their national executive. Delegatea at the annual conference of the Banking, Insurance and Finance Union (BIFU) voted by three to one to resist the introduction of new tecbnology unöl employers sign agreements on its introduction.

And the computer section of the 152,000-strong union passed a motion demanding that in future, software should be included as an integral part of any new tecbnology agreement.

The militant attitude taken at the Blackpool conference means that any attempt by management to introduce new technology without first agreeing the terma on which it is to be lnstalled would resuit in industrial action and the refusal nf staff to operate tbe equipment.

At present, only one such agreement exists, that being between the Cooperative Bank and its employees.

Chris Cater of Bifu's national executive warned delegates not to set the rank and file union members an objective whicb they would be unwilling to support. But the overwhelming rejection of his advice indicates the growing fears in the finance sector over the introduction of new tecbnology, and of the union's inability to control it.

Deputy general secretary Terry Molloy said that the debate was the most important of the conference.

"New technology is the greatest challenge we face, not just for Bifu, but for the whole of the trade union movement. Our policy is to support new technology, but only if implemented via new agreements.

"We are facing an unemployment figure of four million and new technology means that jobs are in danger in banking, building societies, insurance and finance."

The conference beard how future enhancements to the clearing houses automated payments system, Chaps, would have a disastrous effect on walks messengers. The staff, responsible for regular interbank deliveries, would no longer be needed when Chaps2 goes live. The national executive was called on to draw up a report urgently on Chaps developments.

The Royal Bank of Scotland delegation moved a motion asking that DP staff not be overlooked for promotion to general management, It claimed that their specialist akills tended to exclude them from management training scbemes, resulting in few opportunites to progress away from the DP area.

Barclays Bank and Williams and Glyn's delegates were concerned that as more and more installations moved towards a prime shift only operation, shift workers faced a reduction in living standards commensurate witb the loss of shift allowance.

The conference carried the motion seeking to implement shift wind-down payments for all shift workers. Bifu is to prepare a report on the subject for presentation at next year's conference.

Computers may link MPs and their voters

by John Kavanagh

MEMBERS of Parliament could soon have far better contact with their constituents – thanks to information technology.

The consultancy EIU Informatics has been contracted to look at MPs' office automation needs in the light of growing concern about their office procedures.

At present office automation in the Commons consists of an online information system in the library, using terminals to tbe big Scicon bureau, and a mish-mash of standalone word processors from a large variety of suppliers.

"In general word processors and personal computers have been brought in by members on their own initiative," said Dr Gordon Ross, advanced office systems manager at BIU. "We have to see if this is the best way to carry on. There is certainly a groundswell of opinion that some form of automation is needed. Some members are very aware of the opportunities."

Ross added that the aim of office automation would be to "improve the interface between Members and their constituents". EIU would be studying automation in the Commons but the possibility of putting systems into constituencies had not been ruled out, be said.

The study will cover the needs of Members, research assistants and secretaries.

EIU Informatics was formed a year ago as an automation consultancy offshoot of the market research and consultancy firm The Economist Intelligence Unit, part of the group which produces *The Economist* magazine.

Telepathy may be next step in direct input

by Jacquetta Megarry

ONCE the problem of free form voice input to computers has been solved, direct input of brain waves could be the next step.

This was one of the many provocative ideas thrown out by Professor A. Bork of the University of California at Irvine in his keynote address to CAL 83, the computer assisted learning conference held at the University of Bristol last week.

Bork advanced the brain wave input idea in all seriousness. "From the computer's point of view, the problem of decoding brain waves is very similar to that of the coding the buman voice," he said. "We tend to assume that it would be harder but the computer doesn't share our prejudices".

Work in progress in the US has already achieved some success in getting subjects to control motor devices just by "thinking" the control codes. This could have real advantages over joysticks in producing smooth movements. Work at UCSB has also identified an electro-encephalograpbic (EBG) pattern whicb corresponds with a subject meeting an unfamiliar word. This pattern could be identified by the computer and used to feed the student with explanations.

Bork predicted that the role of schools would alter fundamentally in the next 25 years. He anticipated a complete separation between the knowledge and social elements of education. Home computers might deliver the entire knowledge-based curriculum while schools would concentrate on the social elements.

Bork was bighly critical of the Basic language which was a mistake to learn, teach or use. "Basic is close to destroying the computer bealth of a whole generation of students." His theme was that such short term expedients produced long-term problems.

By the year 2000 the computer would be education's major delivery system for whole courses. Courseware development might be along Open University lines, programmed in languages like Pascal or Ada, "not cutesy little author languages which are essentially toys."

The attack on Basic was joined by otber professors, notably Professor Kowalski of Imperial College, who advocated Prolog as a tool for logical thinking as well as a language for programming.

France's CGE goes buying and bags SESA

by Jack Gee

FRANCE'S State-owned Compagnie Generale d'Electricite (CGE) has stolen a march on leading software house CAP Gemini Sogeti by acquiring majority control of Societe D'Etudes Des Systemes D'Information (SESA).

Exercising an option on five per cent of SESA's equity, CGE has raised its stake in the creator of Transpac, the French data packet switching network, to 52%.

CAP Gemini's position looked strong last December when SESA's founder Jacques Stern surrendered his 35% stake to the software firm following his appointment as chairman of Cii-Honeywell Bull.

CAP Gemini, whose turnover exceeds one million francs (£100 million) is headed by Serge Kampf wbo has a staff of 4,000 including 1,000 employed in the United States and a British subsidiary.

SESA, founded by Stern at the beginning of the 1960s, reported a turnover last year of 450 million francs (£45 million) for a staff of 1,200 including 800 engineers.

While achieving its "mini takeover", CGB has been conducting a seduction operation directed at SESA's engineering management. The State owned firm has offered its logistical support to enable SBSA to solve problems in its data packet switching ventures in the United States, arguing that the firm would be stronger under CGE control.

CAP Gemini now finds itself with a 35% stake in SBSA and the disagreeable surprise of finding tbat almost overnight that the firm has come under State management.

Industrial observers say that discussions are going ahead between the three firms which could lead to the sale by CGE to CAP Gemini of its 52% stake in SESA in return for up to 10 per cent of CAP Gemini's equity.

Observers point out that the activities of the trio are complementary. But there are strong suspicions in French industrial circles that CGE is trying to outflank CAP Gemini's Serge Kampf and swallow his firm as well as SESA.

SALES BRIEF

DPS 8 nets $17m for Honeywell

HONEYWELL has scored two orders worth almost $17 million for its DPS 8 computers. The bigger order comes from China, with funding from the World Bank for $15 million worth of computers to be installed at 14 universities. They will be used for applications including student enrolment, library information and software development to handle the 4,000 Chinese characters.

The other order, worth $1.6 million, comes from the US National Aeronautics and Space Administration (NASA) for data capture and analysis at the Kennedy Space Centre.

Betting on CTL

BOOKMAKBR Mecca is computerising its credit betting and has chosen a CTL 8066 from UK-owned systems house Computer Technology. Mecca has ordered two of the computers with CTL's failsafe Momentum options including Momentum link, peripheral switching and mirror discs.

$80m disc drives

AN $80 million order for disc drives has been lodged with Tandon Corporation of the US by Non-Linear Systems for its Kaypro microcomputers. The order includes the TM100 series of 5¼in rigid disc drives, the TM50 half-height floppy drives, and the TM502 5¼in rigid drives for two discs.

Super order

CRAY Research has sold another of its IS supercomputers worth $4.3 million to Honeywell UK for a contract with the Royal Aircraft Bstablishment at Farnborough. Salea of Cray supercomputers have picked up dramatically since price cuts last year, and are currently running at more than one a week.

Boost for Cii

FRENCH State-owned Cii Honeywell Bull has landed nine orders, total value £13 million, for its DPS 8 Multics information processing systems based on twin processors. Over 60 Multics systema are now installed worldwide for technical applications in education, research and defence.

All-in-1 site

ONE of the first European installations of Digital Equipment's All-in-1 office automation package will shortly be made at the Bank of Ireland's computer centre. The heart of the system is two Vax 11/750 minicomputers linked by DECnet with access via a gateway to the bank's main database stored on an IBM mainframe.

Indian power

INDIA bas come to the UK for a £750,000 data capture system to be installed at a power station in Ramagundam. The order has gone to Babcock Bristol, a member of the Babcock Industrial and Electrical Products group.

Battlefield project

THE Army has awarded a £1 milloo contract to Marconi Avionics for a study of pilotless aircraft as part of the Phoenix battlefield project. A major sub-contractor is Flight Refuelling with responsibility for overall design, and for the launch and recovery system.

Four orders

COVENTRY process control specialist OD Systems has received four orders worth £500,000 for its Mancos maoufacturing system based on Data General hardware. Mancos is a suite of programs that monitors and controls both the production process and customer orders.

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Government told to support IT

by John Kavanagh

GOVERNMENT spending policies should support the UK computing and electronics industry against foreign competition says a former government chief scientist, Sir Ieuan Maddock.

In a paper on links between civil and defence technology commissioned by the influential National Economic Development Office, Maddock says that without "much national determination" the UK might not survive in the electronics business.

This view supports a NEDO report produced by industry, union and government executives early this year, which said the UK could be out of the information technology business by 1990.

But Maddock does not call for more spending. He argues that the industry can be supported properly if there is a "more deliberate management of the monies that are sure to be spent anyway".

He says purchasing power is split across many government agencies, many of which might be ordering systems independently from the same overseas supplier.

"In aggregate the purchasers could represent a bulk order which would sustain one or more indigenous company," he says.

Major developments and buying programmes should be made with an eye on the national balance of payments, says Maddock. Specifications which demand big imports of components or systems should be avoided.

Maddock criticises much government buying as unambitious. "Purchasing should be made with a spirit of enterprise, deliberately giving opportunity to new concepts," he says.

But at the same time buyers sbould make the most of existing products. Buyers must avoid the "compulsive tendency to circumscribe the specifications with purely parochial requirements and oddities".

This applies especially to the Ministry of Defence, which should be urged – and in some cases ordered – to buy standard systems. And a network of technology brokers should be formed to enable high-technology companies to take advantage of work done in defence industry firms.

Maddock shows the need for such purchasing rules by pointing to what other countries are doing. He notes that the UK's competitors are setting up national plans and points out that in the US the Pentagon alone has a high technology buying power which matches that of the entire UK.

And without national commitment the future looks bleak. "To fail to do this will surely cause this industry of the future to go the way of typewriters, sewing machines, motorcycles, shipbuilding and textiles," is Maddock's message.

MADDOCK . . . Government support needed – but no extra spending.

Thorn joins the robot age

by John Kavanagh

A NEW UK force has entered the international robotics market in the form of Thorn EMI. The company has signed a European distribution agreement covering robots from Japan's biggest industrial robot manufacturer, Yaskawa Electric.

It is completing development, production and marketing deals with UK and other companies. And it is working on robot sensor devices in its own laboratories.

"We are anxious to have a UK engineering and technology base in robotics and we are talking to UK organisations with specialist design, applications and production expertise in industrial robots," the company said. "We are starting from nothing but we are looking for a rapid entry into this field."

The move comes at a time when UK industry is being notoriously slow about installing robots. In February the British Robot Association said that even when UK firms accept robots they take a piecemeal approach and go for foreign systems.

Racal and Rixon settle their feud

by Donald Kennett

RACAL-MILGO and Rixon have settled out of court their dispute over modem patents which began in the mid-1970s in the US.

The dispute started before Racal bought Milgo. Milgo won a court action alleging that Rixon had infringed its patents. But Rixon appealed in a number of different courts in various districts where both companies traded and in some of them it got the decision annulled.

Racal-Milgo appealed against some of those decisions, some of which in turn were reversed and finally this month both companies decided the thing had got out of hand and settled their differences on undisclosed terms.

A separate dispute between Racal-Milgo and Timeplex was settled out of court last month and both parties agreed not to discuss it. The latest started in 1980 when Racal ceased to be the exclusive European distributor for Timeplex statistical multiplexers.

Timeplex set up its own European distribution network and Racal designed its own range of statistical multiplexers, which Timeplex said at the time misused its trade secrets and breached various agreements.

Timeplex also alleged that Racal broke a supposedly non-cancellable contract to buy $1 million worth of equipment and failed to pay for other purchasea.

In a third case, involving a suit brought and won by the Motorola subsidiary Codex in 1981 and confirmed at the appeal in the High Court last month, Racal has petitioned the House of Lords to be allowed to appeal to the peers, which the High Court has already refused permission for it to do. Codex had alleged an infringement of its patents on a modulation technique for 9,600 bit-per-second modems.

■ Format Communications last week settled out of court with Standard Telephones & Cables which, it alleged in February 1980, was making copies of tbe Format ADX 900 telex message switch. Format had claimed damages for infringement of copyright and abuse of confidential information while STC (then ITT) had been making Format's switcb under subcontract.

Informatics sides with Visicorp

by George Black

INFORMATICS, fifth biggest software house in the world, and Visicorp, authors of the massively popular Visicalc electronic spreadsheet, are joining forces for a major new project.

The aim is to link the new IBM personal computer to IBM and plug-compatible mainframes, allowing end-users access to any of the corporate databases.

"It will be the first intelligent, general-purpose link between mainframes and the coming ubiquitous PC," said Informatica chief executive Walter Bauer.

The two new packages offered by the partnership are Visicorp's VisiAnswer, on the PC, and Informatics' Answer/DB, on the mainframe.

Informatics' European manager Ian Durrell said: "The query is handled on the PC as an intelligent terminal and the neophyte end-user can get at any information be wants from all the databases, such as IDMS, IMS or Total."

Visicorp's Durrell

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MEMOREX

GE moves into micro rentals

by Robert Parry

THE big US industrial group General Electric has moved into microcomputer rental. Its Instrumentation and Computer Service Department, based in Albany, New York, is offering a range of micros to business users nationwide in the US.

Models offered for rental are the IBM Personal Computer, Apples II, IIe and III, and Hewlett-Packard 85 and 86. Rental periods can be from one week to whatever the customer wants, says a GE spokesman. The main aim is small to medium commercial and industrial companies, rather than individuals.

GE's micro rental programme is said to be the first such nationwide general purpose microcomputer scheme in the US, and grew out of its Instrumentation Department's laboratory instrument rental operation. The booming market for personal computers makes expansion into this area attractive.

GE is already heavily into microcomputers through its Geisco bureau operation, which last year bought $10 million of IBM Personal Computers to sell as terminals into the bureau service, alongside various GE terminals. Geisco is attempting to sell IBM PCs in this way worldwide.

WEMYSS . . . "Only deal of its kind".

Wilmot reject makes comeback

by George Black

CONFUSION over ICL's attempt to deliver an order processing and accounting package to partner its mainframe manufacturing systems has ended with the announcement that Systemsolve will fill the gap with Midas-29.

Midas-29, developed by Computer Software Packages for ICL in Australia, was dropped on recommendations made to managing director Robb Wilmot when he urged a product rationalisation. ICL Australia then reluctantly pulled the plug on the CSP project, settling costs out of court.

CSP, a small but technically advanced software house which had no marketing expertise, decided to carry on its Midas-29 scheme and to compete with Interact, ICL's preferred option.

Early last year the $6 million Interact plan, being undertaken by Intermart of Dallas, Texas, ran into trouble. ICL experts went to the US to see what could be done, but in October co-operation between the two firms broke down. ICL refused to continue and Intermart went into receivership.

ICL salesmen, poised to deliver the product at last to more than 100 customers worldwide, were instructed to halt all negotiations.

Meanwhile CSP's product had been finished and came out of a three-month evaluation by broken Jardine-Matheson with flying colours. As word began to get around that Midas-29 would do what Interact had failed to deliver, a customer queue developed including GEC, Adidas and Blue Circle. CSP had to look around for an agent to distribute the package and approached Systemsolve of Sunbury-on-Thames.

"We're very pleased to have concluded this deal," said Systemsolve's marketing manager Peter Wemyss, "because it's the only one of its kind and we're sure it will be what users have been asking for."

Midas-29, voted last November at an international ICL marketing conference as the best general package available to the company's mainframe users, run on ME29, 2900 and 1900 machines under TME and DME operating systems. By the time the DMI is introduced in 1984 Systemsolve plans to have it running under its VME operating system.

Three sales of the package are said to have been made already and Systemsolve is holding talks with a further 30 firms. It has exclusive selling rights for the UK and South Africa and non-exclusive rights for the rest of the world excluding Australia. By special agreement with ICL, Midas-29 users get its database manager IDMS free of charge.

ICL management may well be relieved to have reached the conclusion of the saga. The Interact disaster was preceded by a similar episode in which the German package Ordermaster, originally named Autrass, was dropped after a large capital investment in its development. An attempt by Datasskil to put it back on the rails came to nothing. Later Systemsolve put £600,000 into creating a version for the 2956 market, but ICL found the user base too small and the price too high.

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IBM joins car giant in datacomms project

by Donald Kennett

US automotive giant General Motors and IBM are completing the final stages of a factory data communications project.

A broadband local area network is being used in the 2½-year joint project to allow data to pass between production control and data processing computers of different makes.

The work was conducted at a centre staffed by both companies. A set of communications protocols corresponding to five of the seven layers of the International Standards Organisation's Open Systems Interconnection model was developed.

GM has also worked closely with Digital Equipment, whose computers it uses for production control alongside IBM's data processing systems. GM has asked other manufacturers, including Hewlett-Packard, to review the results.

The project, which began in March 1981, may lead to broadband network products, complete with the MAP (Manufacturing Automation Protocol) open systems protocols, being announced by several major computer companies this year.

The work came to light during a study of broadband LAN applications in 50 US companies conducted by California-based market research company Strategic Inc.

The seven-volume $20,000 study was published in the UK last week by Strategic's European distributor IPI.

According to Strategic president Michael Killen, IBM has five subcontractors working for it on broadband LAN parts, although it has yet to announce a broadband product. Killen previously thought IBM would launch a broadband product last year, stimulating the market to produce sales of 2,000 networks by the end of the year. Instead the figure was 720.

Killen says that broadband LANs play a bigger part in company networking policies than other types of network and account for the biggest cash flow in the network industry.

JOHNSTON . . . "In a strong position to enlarge our market".

BOS/Net extends its empire

by Donald Kennett

MICROPRODUCTS Software, a now independent offshoot of CAP, has implemented BOS/Net, the network version of its five-year-old business operating system, on the Digital Microsystems DMS-3 and is working on a version for the Logica VTS Vitesse personal computer.

BOS has been implemented on more than 50 machines based on nine different processors including eight- and 16-bit microprocessors, as well as minicomputers. BOS/Net had previously been implemented on three — the UK-made Trivector Triton 4, the Apple II and the Burroughs B20 — and MPSL development director John Johnston says he expects this version to become more important to the company as people start using individual personal computers on large networks such as Ethernet.

Logica's Vitesse, a 16-bit machine which also runs under CP/M-86, has a network interface for the company's Polynet version of the Cambridge Ring — an alternative for Ethernet for office systems. Logica's file server software supports up to 254 users.

Digital Microsystems' Hinet local area network, which is claimed to be the biggest selling vendor-independent network in the world, enables up to 32 users to share files used with MPSL's range of business software.

This includes payroll and ledger programs and specialised systems for groups such as solicitors and estate agents.

BOS/Net costs £750, the same as the earlier non-network but multi-user version of the operating system, while the basic single user BOS costs £250.

Johnston says that the work already done to put its operating software on to many different systems means that each new implementation can now typically be done in about six weeks. "We are in a strong position to enlarge our market as people diversify away from single-user operating systems like CP/M on to more multi-user and network systems," he says.

Clinic offers free advice on micros

by John Riley

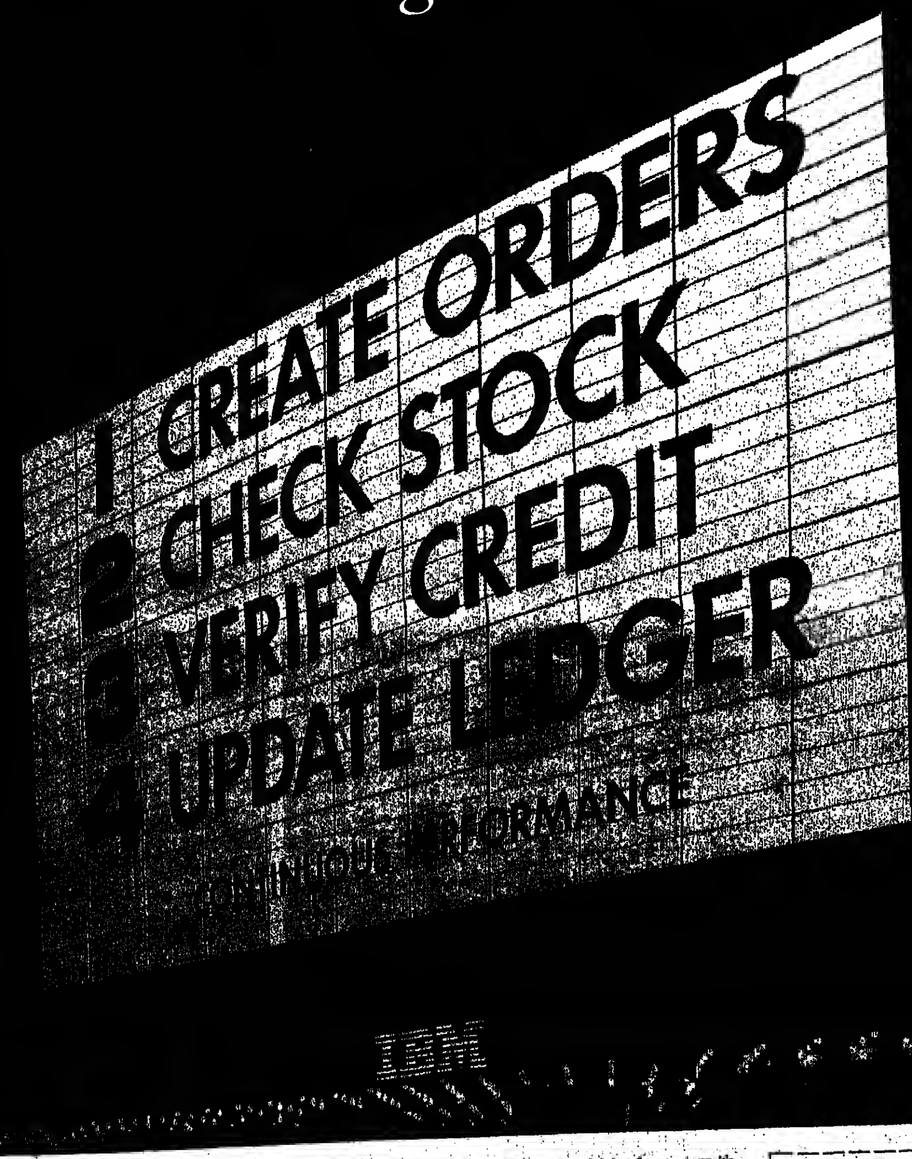
INDUSTRY'S apathy to the government's £85 million Microprocessor Applications Project could be cracked with a microprocessor clinic which gives individual rather than group consultation. That is the view of David Noaks, chairman of the University of Birmingham Microprocessor Group, who is trying to set up such a clinic.

Noaks has approached the Department of Industry to help with the funding, and it has agreed to cover 50% of the clinic's costs for two years (the other 50% to be found from local sources) if it can be demonstrated that sufficient demand for the facility exists by local business.

"The programme of course teaching, encouraged by the DoI and undertaken by all higher education establishments, may well succeed in the long term, but in the short term there is a gap to be bridged between an employee attending a course and the employer immediately being able to adapt the course material to his own company's requirements," said Noaks.

The microprocessor clinic aims to offer free advice about the use of microprocessors, comment on proposed designs, and help individuals design and test systems. Noaks also plans regular "up-dating" meetings.

IBM present 4 separate programmes now showing on one screen.



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SOFTWARE FILE

The Pick micro race is underway

by Claire Gooding and George Black

THE rush is on to get the Pick minicomputer operating system on the lucrative micro market before Unix and other rivals. Pick's appeal is being broadened with IBM versions from the personal computer up to the 4300 series.

And this week Birmingham bureau Fletcher Computer Services announced it had acquired rights to a Pick code generator which could boost the operating system's popularity still further. Called The Programmer System (TPS), it was written by Michael Jones of The Software Group, in Denver, Colorado.

"With tools like this Pick is certain to be the winner in the micro race," said Fletcher's managing director John Davis.

His firm will be marketing it on its own and as an optional extra to the ADDS' Mentor machine running under Pick.

It may take a year or more to put Pick on the IBM PC but suppliers do not want to wait that long. An alternative they are seizing on is Revelation, from Cosmos in Washington, which does not use the same source code as the original but is fully compatible with it and is described by experts as identical. Revelation will be sold in Britain by IDM of Doncaster.

The originator Richard Pick is said to be considering legal action against Revelation's authors for copying his system, but experts think his chances slim, since US copyright law is still fuzzy on re-implementations.

Pick will head the team putting his system on the IBM-PC, an international convention at Lake Taho, on the Nevada-California border, heard last week. Bids for Revelation have been made by System Management, which deals with Pick on IBM's Series 1, and CDI, which is attempting to win world rights to the lookalike.

Revelation's main attraction is that it could open up the myriad of tools and applications that already exist for Pick. On the IBM-PC, users of the standard Microsoft operating system PC-DOS will be able to switch to Pick applications.

Pick will also be a mainframe choice. A version is up and running in native mode on an IBM 4300 at Pick's computer works. It would probably be released running together with IBM's VM system to gain the widest market. Pick Systems is putting $1.1 million into implementation over the next five years.

Booming interest was evident at the Lake Taho conference which attracted over 1,000 delegates from all over the world, compared to about 100 last year. Manufacturers there included Ultimate, Microdata, Altos, Prime, General Automation, DEC, ADDS, Datamedia and Evolution.

The operating system has won a high reputation on minis such as the CMC-Microdata Reality and the Honeywell Level 6-based Ultimate. It was recently put on IBM's Series 1 to boost sales.

IBM is not backing the rush for Pick on its micros and minis, but if the momentum continues Pick could challenge Unix, which has also been waiting for its chance for around a decade.

Pick's fans say it is better suited to commercial use than Unix, which came from academia.

DAVIS . . . "Pick is certain to be the winner."

Logica lines up OEM deals for Rapport

LOGICA is set to sign a number of OEM agreements for the promotion of its relational database management system Rapport.

In the past the major UK software firm has always marketed the product itself, but a recent contract with Ferranti is just the first of a planned series of deals in collaboration with hardware manufacturers and systems houses.

Logica's database expert Colin Banfield said Rapport was to be offered on Ferranti's Argus 700 machines at prices from £25,000 up. And several more such agreements were likely to be [illegible] starting in June.

"We're looking not only for manufacturers to take on the product to enhance their machines but for customers who will be building systems with Rapport embedded in them," said Banfield.

Two suppliers to the oil industry were said to be interested in making this type of arrangement with Logica.

Ferranti users will be able to set up a DBMS for ad hoc queries, which is hoped to be attractive to clients in research and scientific establishments.

Staff quit Software AG

FOR the second time in a year Software AG of Reston, Virginia, has lost its chief financial officer and chief operating officer.

After a policy clash with chief executive officer and president John Maguire, former executive vice-president and technical expert Bruce Smith and former chief financial officer Lloyd Brubaker have quit.

And they had replaced Kenneth Bardin and John Okulski less than a year ago.

The trouble is thought to stem from poor financial results since the company went public in 1981. Software AG, which has its European base at Darmstadt in West Germany, markets the Adabas database system through worldwide branches.

Its UK headquarters, with around a dozen staff, are in Derby, and its British customers have included Prudential Assurance and Allied Breweries.

The company was the developer of the Com-plete teleprocessing monitor and the Natural high-level language. Maguire who has admitted that there is concern among both customers and investors plans to make a statement at the company conference in New Orleans in June.

Micro database

A DATABASE management system for Televideo micros is being introduced by its Derby distributor Midlectron.

TeleDBMS, which runs on single-user systems and networks of up to 16 workstations, is menu-driven and generates CP/M-compatible programs.

Known as Optimum in the US it is available in the 8-bit version now and will be coming in 16-bit form later this year.

Hotel systems

HOTEL management systems developed by AEC Business Systems of Kent and Keel Data Systems of Devon are to be marketed by Andover software house Tabs.

And Tabs has teamed up with Japanese cash register maker Omron to link their machines to its micro accounting packages system via an RS232 interface. The system is due for launch in September.

Spectrums are nearly ready for Prestel

FINISHING touches are being put to the software system that will put Prestel within reach of 120,000 Sinclair Spectrum micro owners.

The work has been contracted out to BP subsidiary Scicon by Micronet 800, the consortium which aims to convert micros into viewdata terminals.

The project involves adapting the BBC Micro, the Commodore Pet, Tandys I and 3, among others.

As soon as the Spectrum software is complete, Scicon's team is moving on to tackle conversion of the Dragon.

Micronet, which consists of Prestel, the Industry Department and East Midland Allied Press, has set up a marketing subsidiary known as Prism to sell the interfaces for a range of micros.

Up to now the Prestel service has found only 20,000 customers, so the link to a rapidly expanding market of home computer fanatics could be the boost it has been seeking.

As the Spectrum-Prestel link is to be marketed at only about £54, from May 1, it seems the strategy is that of the loss-leader to try to put Prestel firmly on the map.

Head of Scicon's engineering laboratory Roger Blakeway said the programming for converting the Spectrum has not been particularly easy.

"We've been making the machine do things they were never intended to do," he said.

"For instance, we've convinced the machine that it ought to have 40 columns instead of 32 and it now prints out in 40 columns too."

Most of the coding has been done in Assembler, with some Basic.

Micronet 800 is now predicting 100,000 users within three years. It bases its hopes on a positive response by 700 BBC micro owners out of 1,500 who replied to an advertisement.

"Word is spreading about this idea. People are impressed with what you can now get for your money.

"There will be a lot of free programs available as well as others that can be bought. And electronic mail facilities are being incorporated," said Blakeway.

In the autumn Business Micronet is expected to add a number of more popular commercial software systems to the present set of domestic products. The packages are being developed by the National Computing Centre (NCC).

SAS statistical system goes portable for a wider audience

by Donald Kennett

A SYSTEM that has been used for such diverse applications as analysing Londoners' attitudes to policemen and analysing survey data from an African soda ash lake is available in a portable version.

The system is the SAS high-level programming language and statistical analysis system from the US-based software house SAS Institute.

Versions of the system, which was previously designed to run only under IBM operating systems, are to be available later this year to run under VMS on Digital Equipment's VAX, under AOS/VS on Data General's MV series and under Primos on Prime's 50 series minicomputers.

The announcement was made at the first meeting of the European user group, SEUGI, in London last week — along with announcements of several supporting products.

SAS combines a high-level programming language originally designed for statistical analysis with facilities for data management, report writing and automated graphics output in a library of 75 procedures.

The supporting products announced last week include an interactive financial spreadsheet procedure, FSCalc, a set of procedures designed for operations research, SAS/OR, and a set of device drivers for the SAS/Graph graphics product which enable graphics output to be sent to an IBM Personal Computer, a Xerox 6500 with a laser printer, an Apple and a couple of protocol converters.

The company expects to take more than 500 orders for Portable SAS by the end of the year. So far it has 3,500 users of the IBM version on a total of 5,400 sites, with European users numbering 350.

The 240 users from 16 countries that came to the London meeting heard 31 papers from fellow users who described applications including computer and operating system performance evaluation at Royal Bank of Scotland, Lloyds, General Accident and Harwell Atomic Research Establishment, and machine capacity planning at Datasolve and BGS Systems, which also used links to its own data extraction and performance prediction software products.

Imperial College has used SAS to analyse attitudes to neighbourhood policing in London, ICI used it to analyse survey data from a soda ash lake in East Africa and the German company ISS has analysed responses to advertising with the software.

Enquiry systems and user friendly front-ends for SAS were implemented at General Motors, Gelsco, Bank of Israel and Reckitt & Colman. And Rolls-Royce used it as a programming language for end users, as well as for prototyping.

Rick Langston, from the SAS Institute applications division in the US, said that the company was investigating implementations of Portable SAS for personal computers, based on the Motorola 68000 and National Semiconductor NS16000 processor chips. Implementation was possible on any microcomputer with a PL/1 compiler and virtual storage, he said.

He explained that the main task in producing the portable version has been to rewrite the code, half of which had originally been written in IBM Assembler, in PL/1. Then they had to write compilers, procedure interfaces, word scanning routines and input-output processors for each machine it was implemented on. Even the parts that were already in PL/1 had to be rewritten into an ANSI subset of IBM's PL/1.

SAS originated as a PhD project by a small group of statisticians at North Carolina State University in 1966. In 1967 they had sold 350 copies and the University told them to get off the campus and go commercial. Turnover reached $4.5 million in 1980 and the 1982 figure was expected to be $18 million.

The UK division opened in 1980 and was expected to show a $2 million turnover for 1982, generated from 60 users.

The company's growth is reflected in its user group attendance figures, which grew from 180 at the 1976 meeting in Florida to 1,600 this year in New Orleans.

Harwell is trying to sell its ship package around the world

Harwell's ship package sails round the world

A SHIPPING package developed at the UK Atomic Energy Authority's Harwell Laboratory is being sold around the world. It has cost £500,000 to develop since the early 1970s and now Harwell is trying to sell it to more than 40 fleets.

The Finnish company Neste Oy has just signed a contract for the software system, which has been upgraded with an interactive front-end data manager.

Since 1966 Harwell has been developing software packages, doing computer research on a consultancy basis and carrying out large bespoke projects for industry and government. The fleet scheduling and planning package was begun with government money for the UK Seabridge consortium.

When the government had been paid back, the laboratory carried on developing the product. It has since been sold to the Norwegian firms of Lief Hoegh and Klaveness Chartering.

The software has been based on IBM mainframes and plug-compatibles, but commercial manager Lionel Cousins said he had high hopes for selling it for use on the DEC Vax minicomputer range.

It is to be demonstrated at a major shipping conference in Oslo, Norway, in June.

Software File is compiled by George Black

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COMPANY NEWS

Semiconductors are set to soar

by Robert Parry

THE semiconductor industry, plagued by the worldwide recession of the past three years, is starting to sound optimistic again.

Intel has just reported first quarter earnings of $12.5 million, more than double its $5.4 million for the same quarter last year, and is seeing a continuing gradual climb in demand.

National Semiconductor, too, reckons that semiconductor component and system demand is increasing, though the components sector continues to be affected by pricing and margin pressures.

"We are seeing genuine improvement in semiconductor orders," says NatSemi president Charles Sporck. "And we're presently experiencing the strongest order rates in more than two years for our components, the company's largest business segment."

But NatSemi's third quarter results show a continuing loss. Despite sales up nearly 10% over last year to $262 million, losses rose to $18.5 million. The same quarter last year showed a net loss of $8.8 million. And $9 million of this year's loss related to the shut down of NatSemi's medium systems computer manufacturing in San Diego.

At Intel the hike in earnings came on sales also up around 10%. The 1983 first quarter revenues were $238 million against 1982's $207 million. This puts the revenue level at much the same as the last quarter of 1982. According to Intel chairman Gordon Moore a large part of the rise in income came from cost cutting measures and higher investment income.

The cash investment came from Intel's sale of 12% of its share to IBM which brought in $250 million. Savings came from the 10% pay cut at the beginning of the year, which has now been relaxed to a 5% cut.

Both Intel and NatSemi expect the present improvement in orders to continue.

"The remainder of 1983 should be a year of gradual improvement," says NatSemi's Sporck, "and I anticipate that by this time next year the industry will be experiencing a strong year, based on a continuation of today's more favourable signs."

SPORCK . . . "We are seeing genuine improvement in orders."

Arab millions help Quest research

THE injection by Arab investors of £2 million into Quest Automation's computer aided design business should ensure continued long term funding in research and development.

Quest CAE, which was split off from the parent Quest Automation in return for the funding, will use the money to increase its capitalisation. That, says managing director Tony Ebel, will allow Quest CAE to go forward in its program of increasing r&d and turnover.

If Quest CAE is succesful in its efforts, the Arab backers would be looking to put in further sizeable sums. The arrangements announced in January by which the Arab Research and Development Trust, through two UK companies it owns, took a 51% share in Quest CAE, has been approved by Quest plc shareholders.

Ebel says it was essential that it received the injection of funds to ensure that Quest CAE could profit from the "enormous opportunities" in computer aided design over the next decade. "It is a positive partnership for the future", he said.

A report in our March 17 issue that the £2 million had already been spent was well off the mark, Ebel said. Quest had spent £1.8 million in its last financial year, but "we have not gone on an incredible spending surge with the new money".

Navy contract

REFERENCE in a March 24 article in Company News to a £2.5 million contract to build a war simulator for the Greek Navy incorrectly stated that it was a joint contract between Systems Designers International and Solartron Electronic Group. SDI was a subcontractor in the contract, which has been completed and not just obtained.

Survey predicts huge growth for CAD

THE latest forecast of massive growth in computer aided design (CAD) has come from Strategic Inc.* The market for CAD engineering workstations for applications like design of integrated circuits will grow at an average rate of 81% a year until at least 1987, Strategic says.

With computer power to cost ratio increasing further, there will be more emphasis on standalone workhorses capable of linking into larger computers for access to databases holding details of materials used in the design.

The key to success in the market, suggests the report, will be in fitting useful applications software into these stations, particularly in making libraries of commonly used routines. Software will be vital in encouraging use of custom made integrated circuits.

But the largest sector of the market will continue to be integrated CAD workstations with full applications support.

The report notes that opportunities will exist for software developers of tailored systems for large companies with their own design groups for integrated circuits.

**Impact of New CAD tools on the IC industry* published by Strategic Incorporated, available for $1,530 from IPI, Nordre Ringvej 201, 2600 Glostrup-Copenhagen, Denmark. Telephone 45 263 20 44.

Micro boom helps storage

by Philip Hunter

SOARING on the back of the microcomputer boom are the makers of mass storage, with bullish predictions of vast increases in turnover floating in the air.

One of the largest UK mass storage makers, Independent Computer Engineering (Ice) has forecast a four-fold increase of turnover from £2¼ million in 1982 to between £8 and £10 million.

The company bases the predictions on a clutch of huge orders, including a recent £2 million bonanza from West Germany.

But corporate planner Paul Griffin denies that the forecast is made just by adding up the value of contracts. "I interpret contracts in a conservative way," he says. He reckons only with money expected to reside on the table.

There is hard evidence of growth, as the company has expanded its central offices in Ashford, Middlesex by 12,500 square feet to bring management, production, development and marketing under a single roof.

This expansion has in part been financed by £250,000 investment from the Electra Risk Capital, a fund set up to sink money in young companies. The fund has also recently invested in American Monitors.

Griffin says that Ice has also set aside some of the Electra cash for developing a new range of products based on a 3½ inch Winchester disk subsystem.

But the next announcement expected this June is for a multiplexer to allow a wide range of microcomputers to be linked together to share peripherals such as printers, and also storage.

Ice already has a multiplexer that will allow up to 64 Apple microcomputers to hook up together to share resources.

But the products that have been making Ice all the money are disc subsystems for most of the leading micros.

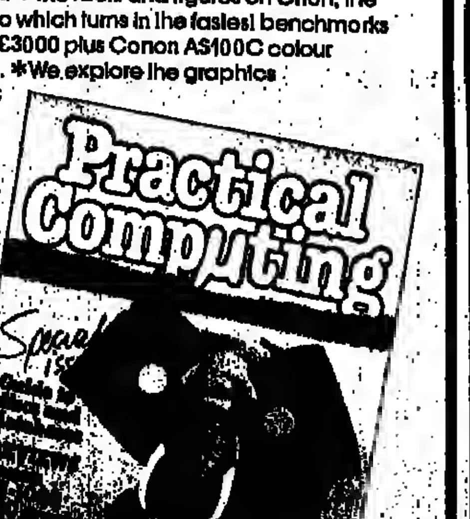
They offer between five and 40 Mbytes storage, with the option of being able to transfer data to a moveable cartridge for security.

Griffin says Ice will go public, probably on the Unlisted Securities market popular with young high tech companies, when the market comes to its senses.

MEMORIES ARE MADE OF DISCS

FULL 23-PAGE GUIDE IN MAY'S SPECIAL JUMBO ISSUE

*Storing. Selecting. Sorting. Accessing... This month's Practical Computing opens up the whole world of computer information handling, detailing all the major disc systems from 8" discs to microfloppies—and the database programs for manipulating them. *The facts and figures on Orion, the new 16-bit British micro which turns in the fastest benchmarks yet. *We test the new £3000 plus Canon AS100C colour computer from Japan. *We explore the graphics possibilities of the BBC micro, and test three new graphics programs. And that's just a sample from this very special issue of Britain's best computer magazine.



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Future is on track for bright future

by Philip Hunter

SCOTTISH micro-manufacturer Future Technology Systems (FTS) is back on track for explosive growth.

An additional cash injection of £700,000 by the company's three original investors was announced last week. And its project to provide a package for travel agents, including access to Prestel, word processing and reservations facilities is gathering steam.

Revenues of £5m had been forecast for the first full trading year ended July 1982, and Future Technology said it expected to have 150 staff by the end of 1982.

But the company ended up with only 80 staff at the end of the year, and announced that for competitive reasons sales would not be disclosed for the moment.

The massive £5 million joint venture with Logica and the Association of British Travel agents (Abta) announced in October 1981 got off to a slow start. The Canadian company Caltrav, which was co-ordinating the package, went bust, and the project went into hibernation.

McHUGH . . . . Sold more in first 10 weeks of 1983 than in 1982.

The £700,000 injection honours an original pledge by the Scottish Development Agency, the Scottish Northern Investment Trust and Castle Finance, to provide more money if asked to do so by FTS, and brings total funding for the company to £1.7 million. The extra money will help finance the addition of 10,000 square feet of production space at the headquarters in Beith, Scotland.

"We shipped more in the first 10 weeks this year than the whole of last year," declares managing director Peter McHugh.

Hungry GCS has new hope

by Philip Hunter

HUNGRY for success after several lean years, London-based General Computer Systems (GCS) is about to release a range of new software products. The company has suffered from restructuring changes following a £600,000 management buy out last April, and has put a bold face on its financial results.

Pre-tax profits rose from £110,000 in the previous full year, to £168,000 in the nine month accounting period ending December 1982.

Extrapolating to a full year, profit would double to £224,000, but the figure is still a meagre return of under 5% on turnover, up 13.4% at almost £5 million.

Managing director Nick Swallow admits that a return of under 10% is disappointing. But he hopes that products which last year consumed development costs will bear fruit this year.

One such product is software to link terminals using the international standard Ascii protocol to IBM mainframes.

SHARES TABLE

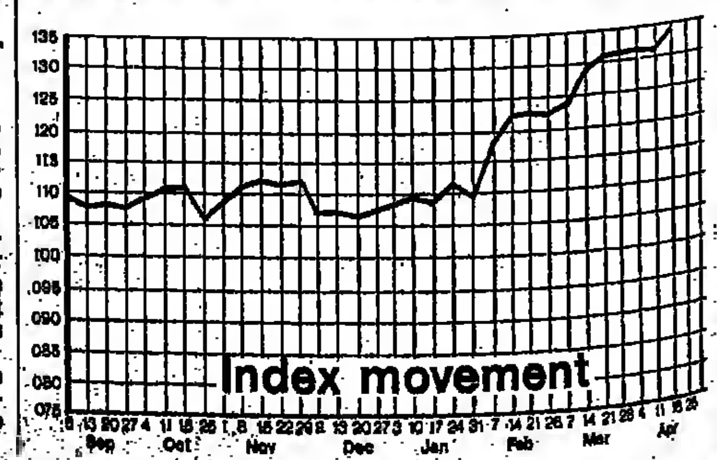
The shares table, which is specially compiled for Computer Weekly, shows selected computer companies that reflect the state of the computer industry.

Date 15/4/83 — Index 134.91 — Change +3.62

Pence 1983 High	Pence 1983 Low	London Stock Exchange Stock	Pence Price	C'nge
409	340	ACT (App Com) (25p)	406	+20
314	170	BOC Int. (25p)	210	–
71	41	B. Bev Kent (25p)	71	+12
187	124	Chubb (20p)	183	+8
176	128	Cole Group (25p)	161	+18
228	182	CASE (20p)	220	–8
669	548	De La Rue (25p)	606	+43
323	284	Extel (25p)	303	–
617	411	Ferranti (50p)	617	+18
232	192	GEC (5p)	232	+22
83	67	ICL (25p)	81	+4
66	41	Kalamazoo (10p)	66	+11
368	[illegible]	Kode Int (25p)	368	–
390	270	Mersec (10p)	390	+12
180	144	Muirhead (25p)	158	+8
648	455	N'market (1981) 180.05)	615	+48
2238	967	Norsk Data	2238	+300
320	213	Office & Elect (25p)	236	+25
1186	710	Philips Lamp (F1 10)	1113	+38
629	[illegible]	Plessey (50p)	604	+40
50	31	Quest Auto (10p)	37	–6
584	413	Racal Elect (25p)	581	+50
360	223	Rediffusion (25p)	350	+8
282	225	Star Comp (10p)	228	–10
380	278	Systems Des (10p)	375	–
623	418	Thorn-EMI (25p)	622	+10
177	136	UCAT (50p)	156	–8
		Unlisted Securities Market		
86	78	Bus Comp (10p)	86	–
818	148	Consult (C&P) (10p)	810	–8
160	[illegible]	Int'europe Tech (20p)	160	+4
247	237	Io Tech (25p)	Suspended	
64	37	J.S.O. Comp (5p)	49	–2
218	160	Memory Comp (IR10p)	195	+8
305	205	Micro Bus (10p)	305	+20
348	310	Microgen (10p)	328	–10
200	135	Miles 33 (10p)	185	–18
217	166	NMW (£1)	187	–8
120	81	Rolfe & Nolan (10p)	120	+10
187	110	ScanData (10p)	180	–15
80	63	Trident Comp (10p)	63	–
86	56	Zygal Dyn (5p)	70	–

$ 1983 High	$ 1983 Low	US Stock	$ Price	C'ge
43½	30¼	Amdahl	37½	–
48¼	29¼	Apple Inc	41	[illegible]
38¾	34¾	Auto Data Pro	[illegible]	[illegible]
46	41¾	Burroughs	[illegible]	+1
18	11¼	Comp Auto	12¼	[illegible]
23	17¼	Comp Science	18¼	[illegible]
13	9½	Comshare	11	[illegible]
60	34¼	Control Data	41½	[illegible]
44¼	39¼	Cray Research	[illegible]	[illegible]
83½	41	Data General	[illegible]	[illegible]
24½	18¼	Datapoint	[illegible]	[illegible]
127¾	85½	Digital Equip	[illegible]	[illegible]
56½	47	Elec Data Sys	[illegible]	[illegible]
8¼	6¼	Gen Automation	8	[illegible]
36½	16¾	Gould	34	[illegible]
51	38¼	Harris	43½	[illegible]
88½	75¾	Hewlett-Packard	78¾	[illegible]
90½	86	Honeywell	92	[illegible]
48½	40¼	Intel	[illegible]	[illegible]
110	95½	IBM	110	[illegible]
82¾	64¼	Litton Ind	[illegible]	[illegible]
17¾	18¼	MDS (Mohawk D)	[illegible]	[illegible]
22	[illegible]	MSA (Mgmnt Sci)	21	[illegible]
18½	[illegible]	Mngmnt Assist	[illegible]	[illegible]
14½	[illegible]	Modular	[illegible]	[illegible]
114¼	[illegible]	Motorola	111	[illegible]
33¾	[illegible]	National Semi	[illegible]	[illegible]
114	[illegible]	NCR	[illegible]	+2
32	28¼	Perkin-Elmer	[illegible]	[illegible]
44¼	33¼	Prime	[illegible]	+1
54	44½	Raytheon	[illegible]	[illegible]
33¾	25¼	Signal	[illegible]	[illegible]
38½	33½	Sperry Corp	[illegible]	–1
24½	20¾	Storage Tech	[illegible]	[illegible]
38¼	24¾	Tandem	[illegible]	[illegible]
61¾	50¼	Tandy	[illegible]	[illegible]
171	[illegible]	Texas Inst	[illegible]	[illegible]
25	18	Tymshare	[illegible]	[illegible]
36½	31½	Wang Lab B	[illegible]	–4
13	8½	Wyly	12	

The table shows the closing prices in London on Friday and in America on Thursday. The Share Index is based on the prices of the UK companies in the table. Highs and Lows have been adjusted where necessary.



MICRO NEWS

Irish extension should speed Verbatim discs

FULL manufacturing processses and an R&D wing at floppy-maker Verbatim's Irish plant will mean a much faster introduction of new products into Europe. The company has added a coating line to its present Limerick site, making it the first Verbatim plant outside California to be completely self-sufficient.

The £5.5 million new plant and equipment, Verbatim's highest technology plant anywhere according to president Mal Northrup, will produce floppies from scratch, rather than shipping in disc media from the US headquarters. "It is a factor of 10 higher in technical content," says Northrup, "and is only approached by our R&D pilot line."

As well as the self-sufficiency in manufacturing, which gives Verbatim a stand-by in case disaster strikes its US coating line, plus cheaper products for EEC countries, the Limerick extension brings much desired R&D work into Ireland.

Over half the R&D done there will be applicable to products and processes worldwide, says Northrup, the rest being more specific to the manufacturing lines at Limerick.

The R&D operation is the first outside Verbatim's corporate headquarters in Sunnyvale, and will employ 10 people. The new coating line adds another 35 to the 400-strong Irish workforce. Next year the new plant should employ 60 people.

A second coating line will be installed in Limerick – some equipment is already there as standby – and a third plant will be built to expand handling capacity for the disc media produced. The manufacturing processes brought into Limerick with the coating line start with the magnetic oxide and resin raw materials, and end up with the punched-out 5¼-inch or eight-inch discs.

The punched discs – or "cookies" – then go to the existing jacketing, certification and formatting processes before being packaged for shipping. Previously the discs arrived from the US at the "cookie" stage.

The bulk of the output will go to Europe, but the plant will also supply coated discs to Japan and Australia. Discs may also be shipped into the US. The quality produced will be equal to that from the Californian factory, claims Northrup. A Japanese coating plant is planned for the next couple of years.

But Limerick will see the first microfloppy line outside the US, to be in production within two years, according to Northrup. He sees these microfloppies, despite the confusion over disc sizes and formats, as the way forward. "You will see a very large computer manufacturer moving to use 3½-inch discs this summer," he predicts. "The smaller discs will be our future."

Northrup is firmly behind the revised Sony 3½-inch espoused by the US/European Microfloppy Standards Committee – which now has grown to 32 adherents – but nevertheless is ready to be driven by what sells out in the market.

"It has to be hard-jacketed – that's what the system houses and users want. It would be much cheaper to go to soft-jacketed discs like the ones favoured by Dysan, we'd need much less capital equipment for a start, but they will not even come close to getting going."

Verbatim's choice of the 3½-inch disc diameter, rather than the three-inch used by Hitachi and friends, was on the technical grounds that it has twice the media area available, so can easily hold a large amount of data without taxing the media.

Northrup sees IBM's 3.9-inch (100 mm) disc as the other likely strong contender for the market – if only because it carries the magic name. But he expresses some doubts about it, as IBM itself does not yet use it, and OEMs are not flocking to it.

NORTHRUP . . . His new plant will produce floppies from scratch.

Two more giants bring out micros

TWO more of computing's big boys are moving in to plug the micro/mini gap. Burroughs, already in micros with its B20 relabelled Convergent Technologies workstation, has brought out a British-built low end business system, the B95, while Honeywell makes a late entry into micros with its up-market Microsystem 6/10.

The new Burroughs machine, designed and built within the UK for worldwide sale, provides compatibility with other systems in Burroughs' CMS (computer management system) products, giving an entry to a range that spans systems costing less than £10,000 to large B1900 systems at more than £250,000, with continuity of software.

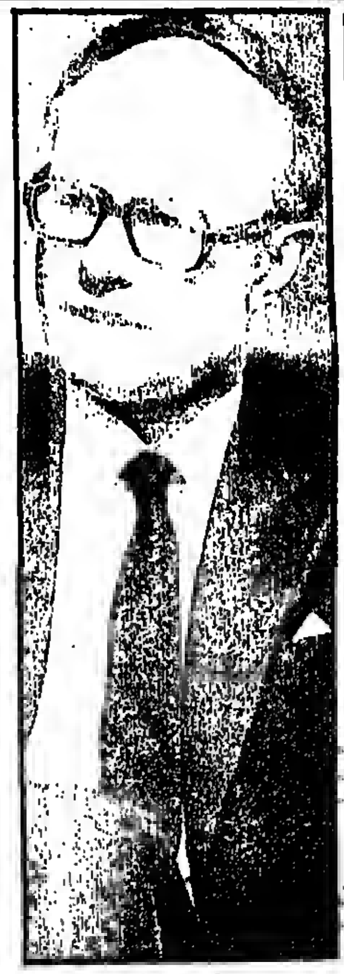
The B95 will be marketed by Burroughs as a low-cost communications processor, controlling networks of dumb terminals or micros under Burroughs and foreign protocols, and as a small business system. In this latter guise it will be handled by Burroughs' newly established ISO network (independent sales organisations) as well as its own sales force.

The ISO operation will encompass the B20 micro line and the entire CMS line, including the newcomer B95, and will provide software, maintenance and training support. Within four years a quarter of UK sales should come via Burroughs third party ISO.

Bob King, Burroughs managing director, adds that an £11 million education centre to be established in Milton Keynes, along with the British origin and manufacturer of the new B95, reflects Burroughs' strong commitment to the UK.

Meanwhile Honeywell, until now resisting the rush to market microcomputers, has unveiled an IBM Personal Computer lookalike in the US. Microsystem 6/10 is compatible with IBM communications protocols SNA and Bisynch, plus Honeywell's own distributed systems architecture.

The machine uses a Honeywell Micro-6 chip, which should allow the micro to run existing Honeywell minicomputer application software under its DPS 6 line's operating system. A plug-in board will offer an 8086 processor to run CP/M-86 and MS-DOS like the IBM PC and the rash of similar machines, but Honeywell is calling its machine a "corporate micro" – to stay well away from the personal computer micro image.



KING . . . of micros?

Oric to use Texas chips

TEXAS Instruments has been signed up to supply more than $4 million of 64K dRAMs for the British-designed Oric personal computer. The chips are used in the 48K version of the Oric 1, a Sinclair Spectrum challenger introduced early this year.

A 16K version, also using TI memory chips, was due to be launched at the same time, but problems have delayed it until May or June.

"The 16K unit is the same design as the 48K unit," says Oric managing director Barry Muncaster, recently elevated from the board.

"We would have had no problems if the specification of a particular chip had not altered just prior to manufacture." This meant a change was needed to the 16K machine's printed circuit board, which has delayed production.

Although both versions were announced at the same time, orders for the machines have been heavily weighted towards the 48K version. A four to one ratio of orders meant that Oric put more effort behind the dearer 48K machine.

The eight-bit Oric 1, built around the 6502A processor, is available through mail order. Some customers requesting a 16K machine have been sent a 48K and told they can keep it on paying the price difference or return it to be replaced by the 16K when it becomes available.

The Oric is also available through high street chains and specialist micro dealers.

Dixons has become the latest multiple to take on the machine, joining W. H. Smith, Laskys, Greens and Currys Micro-C.

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Texas takes 16/32-bit plunge

TEXAS Instruments has plunged into the 16/23-bit high performance processor market with its TM320, now available in sample volumes and with software development support. But TI is not pushing the chip as a general purpose microcomputer.

"In one sense it is a very high end 32-bit microprocessor," says Dave Wollen, TI's microprocessor marketing manager. "But we really designed it as a signal processor. It is the first of a brand new family for TI – and we intend to dominate the signal processing scene in the next few years."

But it is a complex field, he adds, and much will depend on the support available. TI already has cross-development software to run on TI minis, Vax machines and IBM 370s, and third party offering will link to Intel development systems, CP/M machines and PDP-11s.

Wollen reckons the digital signal processing market is about to explode, particularly in areas like speech synthesis and recognition, image processing and telecommunications, and sees a niche TI can exploit. "There are very very few viable semiconductor solutions so far," he says.

Intel's 2920 is considered a first generation device, but there is much more direct competition from NEC, with its 7720 chip, says Wollen. The main attack is on bit-slice and custom chip systems, and on weaning people away from more general high speed processors like the Motorola 6800, Intel 8086 and TI's own 99000 in signal processing applications.

Where the 320 family will win out is in its speed, and on the range of the instruction set that makes a separate microprocessor to control to the system unnecessary. The device also has on-chip RAM and ROM.

TI claims a speed of five million instructions per second for the 320, which puts it well to the microprocessor forefront. In fact the device works on a 200 nanosecond cycle time, and executes 90 to 95% of its instructions in one cycle, says Wollen.

This speed is achieved through the device architecture – a modified Harvard architecture rather than the more commonly found von Neumann type – and its 32-bit arithmetic logic unit. The chip can also perform very speedy I/O transfers, with bi-directional data ports giving I/O transfers to eight address locations at a burst rate of 40 million bits per second.

The modification to the Harvard architure – a bit of a cheat really, says Wollen – is that there can be communication between the program and data buses.

Micro News is compiled by Robert Parry.

HANOVER FAIR

Nixdorf plans to double its UK staff this year

by Kevin Cahill

HANOVER Fair had some good news for UK employment with Heinz Nixdorf's announcement that his company would double its UK staff to nearly 600 this year.

Nixdorf's business is expanding rapidly in the UK, he said, and he hopes to follow the £15 million Midland Bank terminal order with sales to at least two major building societies.

Speaking at the first major Press conference of the 1983 Hanover Fair, Nixdorf, chairman and founder of what is now Europe's fourth largest computer company, described 1982 as a "very mixed bag".

Profits at DM 73 million (£20 million) in 1982 were up 80%, and sales were up 18% to DM 2.29 billion (£620 million). The profit growth in 1982 was from an admittedly slim base, and the growth in orders and turnover was down on the previous year's 25% advance.

But there has been a sparkling start to the first quarter of 1983. First quarter orders are up 30% on last year, led by the company's IBM compatible 8890 product.

The company increased its payroll by 1,300 people during the year, maintaining a trend begun in 1976 of adding about 100 people a month. Nixdorf said the company now had 16,000 employees and would continue to create employment at last year's rate.

During 1982 Nixdorf added around 80,000 sq metres of new marketing and production capacity. This would enable Nixdorf to increase the "own built" component of its products, as well as meeting increased demand for the products. In 1982 Nixdorf introduced the 8890, which is a fully IBM compatible medium sized miniframe designed by the Israeli company Elbit in which US based CDC now has a 30% stake. Elbit has a development contract to continue work on the machine for the next several years, but increasingly, Nixdorf is taking over the actual manufacture of the product.

Heinz Nixdorf said that his company was attacking IBM head on. "We want IBM's customers, and to get them we have to be compatible" he said.

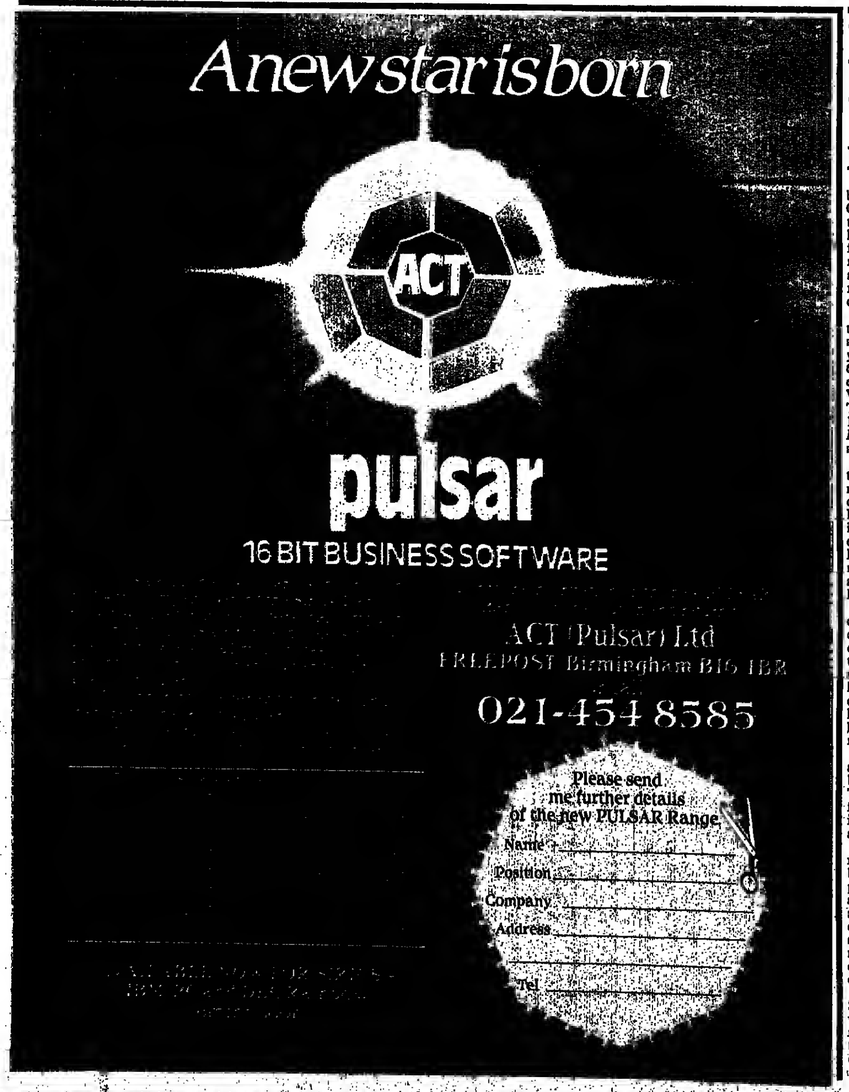
Nixdorf continued to reject emphatically the idea that the company would go further into the IBM marketplace, with either lower end machines or upwards to a top end mainframe. Like ICL, though with considerably more success, Nixdorf has moved into the communications end of the business and is now installing PABXs at the rate of one a day with a one-day turnround on the installation itself.

In the US Nixdorf has finally broken into both profit and positive cash flow, according to finance director Klaus Luft. With an American payroll of 1,700 people and turnover of £100 million, roughly one sixth of the company's revenues now come from the US and it is in the US that the company has had particular success with its 8800.

Luft also revealed that Nixdorf was developing a super micro to run expert systems, and the company was actually demonstrating the first of its expert system offerings called Auto at the Hanover Fair.

Luft was careful to emphasise that Nixdorf had no current intention of going down market and supplying personal micros. According to Luft the personal micro would eventually be the centre of an information publishing, banking and shopping terminal in the home, but until that event was closer to reality Nixdorf would not be going into battle with the likes of Apple and Commodore.

NIXDORF . . . Last year was a "very mixed bag" for his company.



Fair emphasis on small business microcomputers

by John Riley

COMPATIBILITY and integration of computer systems were the keynotes at Europe's largest trade fair at Hanover which ends tomorrow. There was particularly heavy activity in the small business microcomputer and integrated office system markets.

The fair has 10 separate exhibitions with about 6,000 exhibitors, and is on track to beating last year's record attendance of 600,000 visitors. The two largest exhibitions at Hanover are the World Centre for Office and Data Technology (CeBit, with over 1,000 exhibitors) and the World Market in Electrical Engineering and Electronics (1,700 exhibitors).

About one quarter of the exhibitors in each of these two computer-related exhibitions are from outside Germany, and include 39 British exhibitors in CeBit and 95 in the Electronics and Engineering exhibition. One-third of the British exhibitors came at reduced rates through several trade organisations in conjunction with the British Overseas Trade Board.

However, according to a BOTB official, the British presence is disappointing, with many British companies not being able to afford to take part. On the other hand, several German companies are hoping to increase their export drive to Britain, and several exhibiting British regional offices have attracted a considerable number of enquiries.

Many of the products launched at Hanover already made their debut in the UK during the winter. The products have been modified for the German language and, being released together, are drawing significant visitor attention.

The European small and medium-sized business market is being wooed by over 200 companies exhibiting microcomputers, and a large number of office system manufacturers. Personal computers for small business use are being highlighted, with several manufacturers actively looking for distributors for their new products.

US company Corona Data Systems gave its IBM clone a first viewing in Europe. It is on show next to an IBM PC to demonstrate the interchangeability of hard discs.

Many of the products launched had CP/M and MS-DOS operating systems, and software compatibility and availability was stressed by vendors.

The two giant German companies, Nixdorf and Siemens, have both confirmed their intention to intensify their export effort to other parts of Europe. Both companies launched a batch of new products. Siemens launched a 16 bit personal computer, the PC16-10 with 128 Kbyte RAM and a CP/M 86 operating system, as well as new COS software to integrate its office system.

The COS software allows Siemens to link its 6000 series of office systems to the IBM 370. Siemens' drive towards integration is reflected in a reorganisation of company subsidiaries into one unit.

Nixdorf has highlighted the integration of new telecommunications services, such as videotex and teletex, into its office systems. It also presented its full range of computers, several of which were announced earlier this year.

IBM had no surprises. It showed its System 38 enhancements and its new IBM 4250 electrical erosion technology printer.

ICL Germany is showing the new personal computer and business systems together with software packages in the order processing and production control areas aimed at medium sized businesses. According to a spokesman ICL hopes to get a better handle on the hardware market by producing good software.

Since launching the original personal computer in Hanover last year, ICL has only sold about 10 in Germany to date. Sales of the Perq are only just in double figures. ICL Germany attributes this poor showing to a lack of sales staff.

HANOVER FAIR

Japanese micros steal the show

by Kevin Cahill

THE Japanese, like any vendor still new to the marketplace, managed once more to steal the Hanover show with the variety and sophistication of their products.

Steering neatly into the hottest offstand topic among the exhibition's micro vendors — that is, who, when and for how much would a real 32-bit micro be introduced — Sord president Takayoshi Shiina said it would be his company, and it would be in September.

As to price and type, Shiina would only say that anyone could introduce a naked 32-bit micro now.

"That is not enough," he continued. "The technology is very deficient. We will need things like cache memory and a new operating system."

According to Shiina, Sord's September announcement of the 32-bit machine, which the company has been working on since early 1982, will comprise five models.

Meanwhile Sord announced a cassette upgrade costing just $200, which will convert Sord's existing 8-bit M23 machine to a 16-bit MDOS and IBM PC compatible machine.

In addition Sord indicated that a dual 8/16-bit machine will be announced shortly, probably at the CC in America next month.

Continuing the strategy of attempting to become the world's first micro maker to offer a full systems capability, Shiina announced a $1,000 local area network which will link Sord and any other micro to each other. The S Net, as it is called, will be RS232-based and have a speed of one megabit per second. The maximum length of the network, including boosters, will be 1km.

Not to be outdone, Sord's main rival in the Japanese micro market, NEC, demonstrated a fibre optic network for personal computers.

While NEC executives on the stand insisted that the network is not for sale in Europe, the demonstration was on a fully constituted PC 8000 configuration of four micros, two disc units and several printers.

The network, called Netbranch 4800, is available in Japan at a local price of 300,000 yen (about £800) and NEC is expected to make a major push with the PC8000 personal micro range in the UK and Europe later this year.

In the home marketplace in Japan which last year absorbed 600,000 personal computers, NEC moved its market share from 28.9% in 1981, to 35.1% in 1982, narrowing Sord's share of the market from 17.8% in 1981 to 13.1% last year.

Despite the drop in market share, Sord still put on growth of over 50% according to Shiina.

SHIINA . . . "We will need a new operating system."

The IR 160/45, one of a range of German robots which made an impact at Hanover Fair.

Robots are put through their paces

by John Riley

LARGE industrial robots were the most striking equipment at Hanover Fair. German exhibits were dominant, but several foreign companies demoostrated their lighter and smaller machines.

With Germany having the largest robot population in Europe — currently about 3,500 — some foreign companies stressed their microprocessor-based controllers based on programming languages.

IBM demonstrated its commitment to robotic technology with the RS1, a programmable, multi-functional manipulator with six degrees of freedom. It is designed for light assembly, testing and materials handling, with its sophisticated controller programmed in IBM's own AML (A Manufacturing Language). IBM also demonstrated its Sankyo Seiki manufactured 7535 light robot being controlled by an IBM Personal Computer.

A handful of Japanese machines were on show, and two Japanese companies occupied stands. One of these companies, Pentel, which makes light, four-axis assembly robots, made its debut in Europe and was looking for distributors. Its main application is in injection moulding, and a feature highlighted at the exhibition was its PR2000 control system using Pentel's own robot language, which has 10Kbytes ROM and 2Kbytes RAM.

The other Japanese company was Hirata, whose AR H300 and AR H450 are used in television manufacturing both in the UK and in Germany. The Hitachi series of robots were demonstrated by German distributors Zeppelin.

The importance of the exhibition was not so much in novelty, but in the opportunity to view a comprehensive range of robots being put through their paces. These included large machines by Kuka, Asea, Volkswagen, GDA Amec, and others, and smaller ones from various companies including the American Unimation and the British Pendar company.

Kuka, the German manufacturer of large robots for the car industry, presented the first of its IR100 series which can be mounted on the floor, overhead or on walls, used mainly for machine manipulation and welding. The largest machine, the IR 662/80, was demonstrated mounting car wheels with the aid of an external television position sensor which signals the hub hole pattern to the robot controller. The RC20/40 controller which comprises six transistor amplifiers was developed in a joint Siemens and Kuka programme.

The leading Swedish robot manufacturer ASEA demonstrated its series of heavy robots, and introduced a new spot welding robot, the IRB90S/2, with a modified control system to cut programming time by 25%.

Only one British company attended the fair, the Welsh robot manufacturer Pendar, which shared a stand with the Borough of Gwent to promote Wales. It showed its lightweight pneumatic driven Placemate 5 which is freely programmable in space, and which has three degrees of freedom.

Many of the exhibits at Hanover will be taking part in the Automan Robotics Exhibition in Birmingham this May.

IBM nine months late with German Prestel

by Kevin Cahill

IBM Germany admitted last week that it would be at least nine months late delivering BTX, the German version of Prestel.

According to a spokesman the company could not deliver the system this September because "a lot of tests had to be carried out to make sure no one hangs up because they are not familiar with the system."

IBM won the contract against stiff competition from General Electric and from Siemens on a fixed price basis.

The IBM spokesman admitted that the company could lose money on the DM50 million project.

Most German commentators greeted the explanation which accompanied the formal announcement with considerable scepticism, having known for months that IBM was experiencing difficulties which it refused to acknowledge publicly.

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PROFILE

Life's a lottery for this software boss

MIKE SHONE is a gambler. And as managing director of Software Sciences, he has to take his gambling pretty seriously because there are 500 jobs apart from his own resting on the outcome.

"On every fixed price contract you are gambling the company," he says. "There is the risk the system won't do what you claim it does and so you can get sued. And there is the greater risk that you haven't budgeted correctly."

Besides, lives depend on the proper working of the systems in many cases. "If our police system doesn't work there's some poor mugging victim lying on the pavement waiting for help, and it's our fault."

So Shone is interested only in carefully calculated risks.

"We want to know exactly what is expected of us before we agree to anything. A fixed price for a definitive spec – that's what we have to get."

Having studied maths at Liverpool University, Shone is well up on handling figures and calculating probabilities.

"If I lose £100,000 on a job, I get adverse comment. If I'm £250,000 out, I get a rocket. Probably if I'm a million out I get fired, I don't know. It hasn't happened, obviously, otherwise I wouldn't be here."

From university he chose, out of a number of offers, to go to English Electric, which he thinks was a good decision.

"It was a good organisation and thought big. In those days people didn't say, can we do it, should we do it; they just said, yes, we'll do it, it doesn't matter what the job is. We'll do it and this is what it will cost you."

Concorde is a case history he dwells on – maybe because he uses the plane to put in an appearance with his salesmen on the more important, seven-figure jobs.

"The moral of Concorde is not that we put a lot of money into something which didn't work out, but that we didn't go on putting money into it until we had the best in the world," he argues. "If we had made a Concorde-2 and a Concorde-3 then we would have minced up all the opposition."

The same applies in the software world, he says. "We can be world leaders, we will be world leaders if we only have confidence in ourselves."

"We have better technology than the Americans and we've got to believe in it. We've got to intend to do something and then do it, not get knotted up in a lot of committee meetings."

For the year 1983-4 he had a budget of £2.5 million for capital expenditure and £1 million for development time, so it sounds as though he is about to practice what he preaches.

Shone became a manager at the age of 26 as head of English Electric's consulting services department, including data processing.

In 1970 he was recruited by Colin Southgate to become technical director of the newly-formed Software Sciences.

"Colin and Bill Ellis are both gamblers too, so I was in the right company."

Software houses were a recent invention in Britain at that time. Logica and SPL had been in existence only a couple of years.

Shone has always used Logica as a yardstick for that reason. "I use them for a comparison because they are good – not many people admit that about their competitors, do they?"

The growth of turnkey systems was unforeseen. Shone thought the job of a software house was to provide consultancy first and back it up with programs where necessary. But in 1974 all that changed and the firm jumped at the chance to take risks with fixed-price contracts. Others were more wary, he said. CAP had only decided to join in the game a couple of years ago.

SHONE . . . Interested only in carefully calculated risks.

"We like risk and are prepared not always to make a profit – provided we can do so often enough."

One of the difficulties was that hardware makers often did not know the capabilities of their own gear, especially in unusual conditions. For instance, what would be the response time under a certain loading? And if as many as nine makers were supplying parts of a system the risks were multiplied.

Shone is a Tandem enthusiast. "We use their kit most frequently after DEC's because so much of our work needs resilience. There are going to be a lot of people trying to get into Tandem's market in the near future – wait and see."

Growth and success have brought a new set of problems for Software Sciences management.

"When we were 100 we could still all get into a room if we needed to. Now it can't be done so I have to travel around the country a lot and meet people."

He tries to give everyone in the company an opportunity to speak to him every six months by holding meetings. The staff are all graduates and half of them under 30. About 40% are women.

"Oh yes, we take equal opportunities seriously – I get bought a drink by a woman about four times a week."

Last year they took on 60 graduates out of 5,000 applicants.

"Of course it gets very hard to select them. We always take a mix of computer science people, pure scientists and others we just happen to like, be they classicists, musicians or whatever."

Shone's career could have been interrupted if they had failed to find a British buyer when BOC gave them the chance to find new masters. He would not have worked for foreign management, he insists. But Thorn-EMI saved him from looking for a new job.

"We've been with Thorn a year now and I'm still smiling. They understand gambling, too."

PLATFORM

Derek Evans is chief executive of Mercury Communications.

Why should telecomms be immune to all competition?

LIBERALISATION is a major issue in telecommunications policy, and has led to a great deal of debate in the UK and overseas. But it is not clear why it should have aroused so much heat.

For the vast majority of goods and services we accept competition as the natural state of affairs and the best means of encouraging efficient use of resources. Why should telecommunications be different? Instead of assuming that monopoly is the natural state and that every act of liberalisation is a concession or distortion of the market, why not start from the other end of the argument and assume that competition makes sense except if it can be shown that monopoly is inevitable? All the more important because telecomms is so vital in the information technology revolution.

Telecomms is, of course, different in that we need one or more viable national networks and competition needs to be consistent with preserving the integrity and safety of these networks. But this is an argument for regulation, not for monopoly. In my view, discussions should therefore concentrate not on whether competition is a good thing – because the market will judge that – but on getting the regulatory framework right.

Any debate on liberalisation needs to recognise that it is a moveable feast. Once started, the process of liberalisation cannot be artificially frozen in mid-stream. There is evidence of this in the pace of events during the relatively short period between publication of the Telecommunications Bill in November, and the Report stage of the Bill at the end of March. Significant milestones have been cable TV announcements, followed by extensive discussion of the cellular radio licence decision: BT licence proposals: and the Littlechild report, with its far-reaching recommendations on such matters as the prime instrument policy, resale and, of particular interest to Mercury, international liberalisation.

These are important steps, but much remains to be done. The Telecommunications Bill ties up a number of loose ends, but certain key issues are not clear. Much depends on the contents of the BT licence, on which the present Bill proposals need considerable tightening in order to ensure that anti competitive practices are effectively prevented; and also the quality and strength of character of the Director-General of Telecommunications, whose identity we are all eager to know.

Apart from the identity of the DGT, we are not yet clear whether the Office of Telecommunications will have sufficient numbers of staff and professional expertise to do its job effectively.

That is the regulatory program towards liberalisation. Changes in attitude are every bit as important. Although we are already seeing the beneficial effects of the stimulus of competition, there can still be difficulties in convincing users of the benefits of liberalisation.

The other context in which liberalisation must be discussed is political. I must draw the clearest possible distinction between liberalisation of telecommunications, which can be expected to bring wide-ranging benefits, and the privatisation of BT, which is a totally separate issue on which it is not appropriate for me to comment. Nobody, whatever their political affiliation or established interest, need fear liberalisation. It is essentially a response to a market growing at an explosive rate, in which there is more than enough opportunity for everybody.

Derek Evans

DOWNTIME

Dangerous ground

LEAGUES and ladders dominate the sports of this world obsessed with winning and losing. In some cases there is little cause for dispute, since the rules are well defined, as in football or cricket. But in others, like tennis, a computer is needed to work out grand prix rankings according to a more complex formula.

Here the trouble begins, and it is unfortunate that the lay media has a propensity to blame the computer, when it is the ambiguity of the rules that is at fault. John McEnroe, regarded by many as the finest tennis player of our times, but inflicted with a self-destructive personality, was recently grumpy that the computer had him down as number three in the world.

Meanwhile computers are treading other dangerous ground. One

is being used to track the fitness of the 147 participants of the *Sunday Times* Getting in Shape project. Using a technique developed at London's Brompton Hospital, the body is photographed using light split into strips, and the images analysed on computer. A direct comparison with previous images tells you how much flab has been gained or lost, and yields a display that makes one look like a zebra.

The games they play!

IT's enough to turn one green to hear of these adolescents making a fortune from computer games they have developed, when their faces still have the cherubic look of choirboys.

You can read about one such youngster in our Workplace page – a mere boy of 16, who runs a software team and employs his mother to clean the floor.

A proud mother she is. But are all parents that humble? Many, I suspect, feel woefully inadequate beside their high tech offspring.

As a result, we have a new idea – the computer weekend for parents. Dolphin Camps, is inviting parents to come and join their children for hands-on experience for a few days.

I suspect most parents will shy away from this potential humiliation.

Master of the Universe

IT is easy in the computer industry to lose sight of reality and let loose rhetoric to suggest powers that, shall we say, are normally considered the preserve of God Almighty in his heaven. So it was that James Mertiman, in unveiling the UK Universe project to link high speed computers by satellite, introduced himself as chairman of the Universe Steering Committee. Indeed a position of power and responsibility.

Incidentally the model of the Universe satellite at the Info exhibition is hung upside down, with all the receiving and transmitting dishes pointing at the sky, perhaps to emphasise that, like the bat, it hears and sends out signals that to ordinary humans are undetectable and incomprehensible.

A bit of realism

"THE usec fciendlincss of Reality is achieved through the use of Englisb – a specially designed data management language," writes some public relations person. Indeed. I wonder how this would take the great lexicographer Dr Samuel Johnson, author of the first comprehensive, if idiosyncratic and often inaccurate, English dictionary.

One thing Johnson could not abide was cant, for which he prescibed a pint of ale as remedy. Nor could he stand debasement of our great heritage, the English language.

No doubt in my mind that Reality's words would be more than he could stomach.

Come to that, the word Reality would probably have stuck in his throat. For above all Johnson was a dreamer – he even believed he could write poetry.

Famous name disappears

THE grand old name of Univac has at last disappeared from the computer industry. Sperry Univac is now just plain Sperry. The name Univac, it seems, has become an embarrassment, reminding one of it does of old vacuum cleaners and exhibits at the Science Museum.

Sperry has for years been trying to dissuade the industry from contracting its old name to Univac, and bas had trouble convincing some of us that the company is in the fourth generation of computers.

Sperry used to be just Sperry Univac was suffixed to the title with the release of the Univac I in 1950, the first computer to be sold to a civilian user.

During the ICL crisis in 1981, some even wondered if there might be a Sperry ICL, until the government stormed in with cash, Laker law and Wilmot.

Safe at last

IT would be a tragedy for us all if the next Parliament were to lack the diplomacy, tact and energy of the IT manager Kenneth Baker. So you will be pleased to learn that he has found a safe Tory constituency, Mole Valley in Surrey, for the next election.

His present seat at Macclesfield has been swallowed up by boundary changes, and he failed to win the nomination for his first choice of a new constituency.

Chad

10 YEARS AGO

FROM COMPUTER WEEKLY OF APRIL 19, 1973: The government's unequivocal support for the British computer industry was the main theme of a speech by Kannoth Baker, Parliamentary Secretary to the Civil Service Department . . . Star of the Datafair 73 exhibition was the GEC 4080 computer . . . Capital Radio, due to take to the air, was negotiating with EMI for an automation system worth £20,000.

ComputerWeekly

Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS

Thursday, April 21, 1983

The court case DEC can't win

DIGITAL Equipment and the small UK systems house Darkcrest are today going to the High Court to fight out a lawsuit which probably neither company wants. As a small firm Darkcrest does not want the legal costs. And DEC know that whatever the outcome it cannot win in the long term.

DEC is accusing Darkcrest of pirating system software. Darkcrest denies the charge and says its reputation could suffer because DEC has been slow about following up its claims in the court. Darkcrest also believes this is a test case: if DEC wins it will pursue similar claims against other systems houses. The case is seen as part of DEC's aggressive new approach, an approach aimed at giving it a bigger slice of the end user market.

If the case goes in DEC's favour the company can justifiably say it is simply protecting its software ownership rights. But it could quickly start to lose friends in the systems house market – and in the UK 45% of its business comes from third parties.

In recent weeks systems houses have reacted angrily to DEC suggestions that they should concentrate on specialist industries, the implication being that DEC should be handed the end user market for general applications such as accounting.

If the company gets even more threatening and starts taking systems to court, what is now a simmering pot could boil over and firms which make up that 45% of DEC's business could start moving towards the likes of IBM and Wang. These aggressive companies are now putting a lot of effort into wooing systems houses.

If DEC loses the Darkcrest case the result could be disastrous. Those who believe the company is trying to frighten its small competitors in the end user market would no doubt feel justified in shouting about it. There could be a massive loss of confidence in DEC by systems houses in particular. And the company could find itself before an EEC monopolies enquiry, for Darkcrest and other systems houses are preparing a case against it.

DEC has long been respected as a gentlemanly company with quality products. But win or lose, it now risks going the way of the barbarian in this David-and-Goliath battle.

Where were the Brits?

IF you came to the conclusion that technologically, the United Kingdom did not exist at the Hanover Fair, you could be forgiven. Among the 3,500 electronic and computer companies exhibiting, just 39, a little over 1% of the total, were from the UK.

But it wan't just the numbers – exactly the same as the Swiss contingent – which were a sad mark of the state of the UK computer industry.

Quality and size count too, and over one third of the UK companies were appearing in the shape of little more than a name on a trade association stand. Alone, almost like a surrounded Custer waiting for the knife to fall at The Little Big Horn, ICL provided a stand which was at least in keeping with the image we like to have of the UK as a significant industry presence. So good on 'yer ICL, but what about the rest of the UK computer industry, in which Mrs Thatcher and her ministers place such hopes?

The short sharp fact is that the biggest computer company in the UK, IBM, is an American company, and so is every other computer company in the top 10 in the UK, except ICL, which is the second largest company, but almost £350 million in turnover behind IBM UK.

There is nothing wrong with having a free market and loads of foreign companies in it, quite the opposite in fact, but something somewhere is more than amiss when the UK appears at a top European Fair in the shape of a national contingent so small that we rank on a par with the Swiss.

The conclusion is simple: the UK if it is going to have any future in the age of IT, and any exports to offer to that age, is going to have to do some hard analysis, and the government some hard thinking, on just how we are going to compete with the best in the world.

1984 and all that . . .

THIS week's example of the strange things people say about computers was sent in by N. R. Patterson of Fife, Scotland, who wins £5.

Court officials withdrew the fine imposed by a judge last week and blamed a computer.

Dundee Courier and Advertiser

LETTERS

Putting the record straight on SSP

INDUSTRY'S reaction to the production of test data for SSP systems has been remarkably divided.

A number of manual and computer systems houses have actually said how helpful it was and have made appropriate changes to their software – others have protested loudly but have nevertheless indicated that they have made or are making changes – and a number have buried their heads in the sand.

In a letter from Target Computer Group (Computer Weekly, April 7) the group marketing executive implied that IMS is selling its own product while offering "independent" advice. I must emphasise that we have no financial connections with any systems house producing SSP computer software.

It is time that the record was put straight and the discussion on SSP, one of the most fundamental changes to occur in personnel and payroll administration, developed in a more positive form. SSP systems sales will be a major market over the next few years.

We know quite a lot about SSP and have trained payroll staff from many large corporate organisations irrespective of the SSP system being considered. The constituent elements of our manual training package, developed last year, are available as a modular manual SSP system, a solution only recommended for the smaller employer, but more importantly to record supplementary information for the many payroll programs incorporating the minimum legislative requirements.

A bureau offering monthly processing cannot, with the best will in the world, supply adequate SSP entitlement information in time for the issue of the necessary exclusion and transfer forms.

Rees also alleges that IMS failed to arrive for a hands-on test – our tester's report indicates that the appointment was formally cancelled and that at January 16 the system was not demonstrable. This position of uncleanliness was echoed throughout the industry – how many software houses had supplied an SSP system by February 8?

Further, information on the Target SSP system supplied to me personally on January 17 contains a number of major errors of analysis. One we particularly liked was the quite specific instruction that SSP is to be treated as earned income and subject to NI and PAYE, but company sick pay additional to SSP shall not be subject to NI and PAYE.

We wish it were so!

It has been our experience that the analysis of the Social Security and Housing Benefits Act and its associated regulations has not been thoroughly carried out.

The reasons for this should be examined thoroughly as it is likely that SSP will be followed by further unburdening by the government.

A number of systems houses have indicated that information was not readily available from the DHSS, who in return say that the legislation was developed in consultation with computer users and, after all, the Act and regulations are there to be studied.

As a result of this confusion, the whole discussion on SSP has missed the one essential point that, used properly, not only can SSP make a significant contribution to company sick pay schemes but that the administrative burden can be funded.

M. D. COPLESTON
Managing director
IMS
Exeter.

Impact of Esperanto on computing

JOE CELKO'S article (Computer Weekly, April 7) about "storing words in a messy language" was excellent, but may still have left your readers with a serious misunderstanding.

The main use of the international language Esperanto is not to make life easy for the designers of computerised dictionaries. No, it is used by millions of people around the world to communicate with others on whatever subject interests them, whether it be the design of microchips or the state of the weather.

The simple structure of Esperanto means that they don't need to be linguists or have to spend years learning it.

Your readers have now missed the Interkomputo international computer science symposium and exhibition in Budapest which was conducted entirely in Esperanto. However, those who start learning it now will be fluent well in time for the next one in 1984.

And for those whose travel budgets don't stretch that far, a 19½p stamp is all you need to correspond with a non-English speaking computer scientist or user in another country.

The first step is to write to the British Esperanto Association at 140 Holland Park Avenue, London, W11 4UF and ask about the free 10-lesson correspondence course.

FRANK SHARMAN
Chester.

Flashing cursors

MR WOODNICK (Computer Weekly, March 31) can be reassured: there is nothing "subliminal" about flashing cursors. If there were, they would be perceived not as flashing, but as steady.

The essence of a subliminal image is that it cannot be consciously seen, and the viewer processes a whole message without being aware of it. Flashes on any system I have encountered have always been at far less than the critical fusion frequency (about 30 a second for dim lights, nearer 70 for brighter ones), and are consequently always seen as separate events.

Even if they were above the critical fusion frequency, there would still not necessarily be any involvement or subliminal phenomena; at least no more so than anything else depending on the "phi phenomenon" (apparent movement), such as television and film. The likeliest explanation of what he has observed is that the eye is primarily a movement detector; that a flash (by stimulating cells in the same manner as a moving light) is perceived as movement; and that the use of flashing cursors reduces the time and effort needed to locate them. This may place less strain on the operator and thus be beneficial.

The rate of flashing is too low even for the cisks to people prone to epileptic seizures that can arise from "flicker" on cinema and television screens; I am o little dubious, however, of any situation requiring anyone to respond to even as many as five prompts at any one time.

In passing, it would have been useful if Woodnick had given references to the tests he mentions, so that it would be possible to examine the experimental method used and the results obtained.

PAMELA E. M. MADDISON
London SE12.

Protection

FURTHER to your two-page spread on data protection (CW, April 7), I found it difficult to understand the purpose of the writee. Is Hannan Rose seeking a platform against the government, or against lawyers or against the computer industry? If so, he fails on all points because I defy anyone to understand his article without a copy of the Bill beside him.

On the other hand if the articles are intended to be a thoughtful analysis of data protection so that the computer industry can understand the issues, then they fail again. Nowhere is there any mention of the Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data (European Treaty Series No 108) which gives definitions in very simple terms.

BRIAN W. HAINES
Barrister-at-Law
London NW1.

Inmos second sourcing

IN your cover report on Inmos (Computer Weekly, April 14) you stated that Inmos had announced that it would act as a second source for Fujitsu's memory products. This is emphatically not the case.

At our Press conference the possibility of Inmos entering agreements for other companies to second source its products was discussed. No such agreements have been entered into.

It was also mentioned that Fujitsu has produced a part that is functionally compatible with the Inmos IMS2600 advanced 100 nanosecond 64K dynamic RAMs. It adopts the features of nibble mode and CAS before RAS refresh that were pioneered on this product. Thus it is Fujitsu which is providing an alternative source for an Inmos product.

R. J. SELWOOD
Manager, External Relations
Inmos

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WORKPLACE

Will Cobol resist the charms of modern Ada?

WHEREFORE art thou, Ada? Jean Ichbiah, recognised by many as the language's inventor, declared recently that it is set to sweep Cobol aside as the leading language of commercial data processing.

This certainly seems to be the belief of the European Economic Commission, which this year has poured £4 million into Ada projects other than those concerned merely with defence applications.

The EEC in November 1979 announced that a European systems language could be built around Ada, if certain modifications were made.

These modifications were incorporated in the definition of the so called Ada Apse, or Ada Program Support Environment. The Apse was deemed necessary to support Ada programs throughout their life cycle, and provide the file handling capabilities needed to support database applications.

The US Department of Defence set up the Ada Joint Project Office (AJPO) in December 1982 to coordinate Apse developments, and develop the language definition and standards. Part of this work was completed this February with the announcement that Ada had joined Fortran and Cobol in the elite recognised by ANSI, the American National Standards Institute.

The ANSI standard will soon be proposed as a draft to ISO, the International Standards Organisation, according to Bob Mathis, technical director of AJPO. "We tried our very best to respond to all comments before announcing the ANSI standard," says Mathis.

Almost 6,000 public comments were received, and Mathis believes that all shades of international opinion have already been catered for, so ISO should have nothing to complain about.

But the ANSI standard is the one that matters, since it opens up for Ada the enormous US government market, and public sector markets in other countries such as the UK which recognise ANSI as the definitive standards body.

But meanwhile many people stuck in the mainstream of data processing beg Ada to keep to its place in scientific and defence applications.

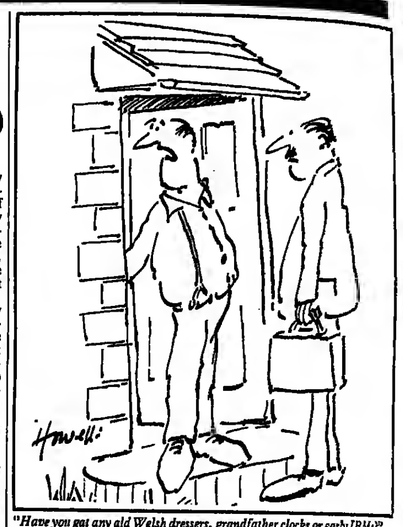
"If Cobol is ousted, it will not be by Ada, but by query languages and menu-based highly intelligent systems," says John Piggott, managing director of software specialists S&PC and a member of the British Computer Society specialist Cobol group.

There is a fundamental misunderstanding about Ada's ability to handle commercial processing tasks, Piggott asserts. "It doesn't compete well with Cobol and doesn't have the ability to handle records."

Piggott's notion is seconded by Ken Myer at British Gas, who follows closely developments of program generators. "I would say Ada has its place," he condescends. "But it doesn't solve the basic problems of data processing. Things have to be done over whole files and fields and Ada does not cope with these."

The Ada Apse would in theory supply these file handling facilities. But Myer does not believe that it is the right way to go about the problem, since yet more intermediate languages will have to be developed. Application generators are more likely to succeed Cobol.

● Jean Ichbiab, with two other members of the original Ada design group, John Barnes and Robert Frith, will give a three day Ada Seminar on May 4-6 at the Royal Garden Hotel, London. Details from David Seekings on Beford (0234) 48338.



"Have you got any old Welsh dressers, grandfather clocks or early IBMs?"

EVANS . . . matched from school by £17,000 a year.

Games whizz-kid gives his mum a job as a cleaner

EUGENE Evans is no ordinary computer whizz kid. At 16 he must be the youngest software manager in the country and the way he is going will soon be among the richest. His basic salary this year is £17,000, and he expects bonuses for meeting sales targets for the games he has written to more than double it.

Evans was snatched from school last December by Imagine Software of Liverpool, that breeding ground of success stories, and appointed software manager. His job is to write computer games programs and build a programming team.

"I'm interviewing 20 programmers. If they are good enough, we will take all 20 on," Evans declares. Hardly surprisingly, educational qualifications are irrelevant. Evans bimself passed six O levels, but does not think much of our educational system.

His interest in computers began when he was 13 and got a job as coffee maker and cleaner for s shop called Micro Digital. He also began to write computer games programs in his spare time.

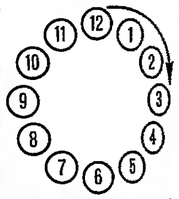
It was his programming prowess that eventually attracted the attention of Mark Butler, who had set up the software house Imagine Software.

The remarkable sales of games cassettes that Evans has written is the key to the huge earnings. One recent release costing £5.50 sold 25,000 in the first month. The games are written mostly for the Vic and the Sinclair Spectrum.

Evans senior thought his son ought to go in for the more serious business software — until he saw how much money he was earning. Mrs Evans must be pleased too — her son employs her to clean his offices.

Evans has in fact no immediate intention of writing business software for personal computers. "Why write business programs that sell to just 3% of personal computer users when we can write games that we can sell to 43%," he points out.

PUZZLER



CAN you "double up" these 12 coins to form six piles-of-two in six moves only either way around the circle. Each move must consist of picking up a single coin, and passing it left or right over two others (which may or may not be already stacked) before settling.

The first move (12-to-3) is indicated. See page 46 for solution.

CONSULTANT'S CASEBOOK

John Simpson starts an occasional series by explaining himself and his job

Those who won't do or teach consult

I HAD always believed that those that can — do, those that can't — teach, and those that can do neither — join consultancies!

So what induced me to join a consultancy?

I had been in the DP industry for almost 20 years. I started out on Pegasus and Orion machines, progressed on through IBM 1400s, then 360s, 370s and upwards, with stops along the way for various pieces of Burroughs, Honeywell and ICL kit.

During this time I had worked variously as an operator, a programmer, system designer, systems analyst, project leader, supervisor, and, lately, systems manager.

At one time, in the middle of all this, I had spent a year selling accounting packages for a software house, with a brief period as a lecturer.

When I joined the industry mainframes were measured in multiples of 8K and were as big as a London bus, the word "minicomputer" had not been invented, and chip technology was confined to the fried fish shop around the corner.

All this is mildly interesting and amusing, I hear you say, but what's it to do with consultancies?

Well, for the past three years I had been the systems development manager for an engineering company in Swindon. The company was relocating all but the marketing department to its main plant near Carlisle.

Much though I liked the area around the Wirral, I had decided for various personal reasons, mostly concerned with my children's schooling and my own preference for the Cotswolds, not to relocate with the firm. So I was looking for a new job.

As it happens I was in any event becoming concerned that I was getting tied down in too narrow a speciality. My previous two appointments had been in engineering companies, so I felt anyway that it was time for a change. My career needed broadening, having gone too deeply perhaps into one industry.

Consultancy, I believed, would provide the broadening influence I required. For my part, I would bring to consultancy a breadth of information systems experience, and a particular knowledge of the engineering field.

I was fortunate that the Cheltenham office of one of the larger systems consultancies was looking for senior staff.

My first interview with one of the partners quickly dispelled the image of consultants as people who simply borrow your pen to tell you what you know already. It was clear that this was a firm that believed in consultancy very much as a profession, actively encouraging their staff to obtain the MIMC qualification, and running public and in-house courses on consultancy theory and practice.

While the initial questions from my interviewer might have been to a set pattern, it was obvious from his follow-up to my answers that he had been around the DP scene himself for quite some while. I was impressed with the thoroughness of his questioning, and felt that I had been given a very substantial going-over.

In all I attended three interviews, the final one being in front of a panel of four. At the end of each interview I was successively more impressed with the professional approach of the company.

They were clearly at great pains to ensure that they employed individuals with the right balance of experience and personality. On the one hand a consultant had to be able to empathise with his client's problems and situation, while at the same time retaining impartiality and objectivity. He must be able to project an image of authority and competence, while not appearing aloof or patronising.

As part of the evaluation process I had also to take one of those intelligence and personality tests, and was surprised to find that I still had a facility for mental arithmetic. But I did have the greatest difficulty in one set of pairs comparison tests in deciding whether I would prefer to be a florist or a steeplejack, a dentist or a dancer!

In any event, I appeared to be sufficiently intelligent and suitable for them to offer me a position. In the meantime I had turned down one job offer (from another engineering firm!) and had made up my mind to accept the consultancy job if it came my way.

The sometimes cynical, sometimes glamorous view of the consultant held by many (including previously myself) quickly dissolves in the reality of consultancy life. Travelling around the country, sleeping in hotels, and often eating junk food, has little to recommend it.

No-one in the company has any romantic notions about the work consultancies undertake. We provide the full gamut of hardware and software studies, efficiency reviews, audits, analysis and programming assignments and planning and strategic studies.

We are generally called in either when a company has a special one-off problem to solve, and has insufficient knowledge, experience or resources to handle it itself, or else when it has a particularly thorny problem (political or otherwise) that it feels outsiders can best address.

We believe that we provide an objective and professional service, drawing upon a wealth of experience in both the technical and managerial fields. Operating as part of a highly professional organisation, offering a full range of consultancy services, and often working at the senior management level of client companies, provides job satisfaction and motivation.

I am fast coming to realise that those who can sometimes have to do, teach, and act as consultants all at the same time!

Television company gives away its Univacs

EQUIPMENT worth over £1 million has been saved from the knacker's yard and given to the Southern Science and Technology Forum, based at Southampton University.

The equipment, including two Univac mainframes, 12 video terminals and nine printers, has been donated by independent television company TVS.

But the computers haven't been saved intact because maintenance costs of £15,000 a year are too high for the Forum. They are to be broken up for spares and research.

Southampton University departments and local schools and colleges will use the parts for research and tinkering, but most of the VDUs and printers will be saved for further use.

TVS has replaced the Univac equipment with a Honeywell system to handle the booking and invoicing of television commercials. "We choose Honeywell because of the software," says TVS controller of computer services Les Willson.

TVS had written the original software for the Univac. One important feature of this software, continued on the Honeywell system, is to avoid almost identical brand names appearing in adjacent commercials.

"It would be unfortunate," declares Willson, "if the chocolate Kit Kat appeared beside the pet food Kit-e-Cat in the same commercial break."

Compute a conference site

CONFERENCE venues can now be found with the help of a computer at a £25,000 centre set up in Coventry by Peter Rand Conference Placements. But the venue booking service is not yet computerised.

The computer contains information of location, style, accessibility, number of bedrooms, meeting facilities, dining facilities and sports available. It also contains confidential information of the quality of the venue based on comments by clients.

Geoff Webster of Peter Rand admits that holding confidential information on computer could cause problems if the Data Protection Bill giving freedom of access to computerised files becomes law. "We ask clients for comments," says Webster. "But we have always said that comments are used as we see fit."

"The service will save companies an awful lot of time phoning up hotel after hotel trying to find a suitable venue," says Webster. "The computer service will also save us an awful lot of time."

Webster admits that information from hotels and other venues on available dates will not generally be held on the computer. But if a hotel announces when its rooms are available, it is possible to have the computer hold details.

The venue booking service is free to conference organisers.

Workplace is compiled by Philip Hunter

PEOPLE

■ The North of Scotland Hydro-Electric Board has established a computing and services department to be headed by Andrew Robertson (above), who has been appointed controller. He was formerly the Board's deputy chief financial officer.

■ ICL has appointed Dr Aodh O'Dochartaigh as director of the company's consultancy and training services division. He will undertake this role in additinn to his present duties as director of the DNX division. He joined the company from Telecitron in August last year.

■ AICS, the Association of Independent Computer Specialists, has a new set of officers following its recent annual general meeting. Re-elected were: Graham Knight, chairman; Jon Baldachin, secretary; and John Ashmele, recruitment officer. New appointments: Dr Sidney Beecb, treasurer; John Healey, membership secretary; Mike Toomey, members' services secretary; Derek Eldridge, public relations officer; and Brain Dansey, newsletter editor. The association's main objective this year will be to promote the interests of small and independent companies which, says AICS, are under constant threat from many sources, despite promises of support from government bodies. Details 01-437 0678.

■ Paul Alexander bas been appointed to the newly-created post of administration manager for the independent computer maintenance firm GCS Engineering. He joins the company from Wasp Computer Services where he was applications director.

■ Steve Markham has been appointed director of European marketing at Floating Point Systems. He was previously manager for FPS' Northern European region. Replacing him in this role is Russ Gadd, who was previously FPS' sales manager for Northern Europe.

■ Following the promotion of Fred Mobbs to the post of vice-president, South Europe operations, Control Data has announced that Lyle Davidson will take up the position of UK managing director of the company. Davidson joined the company in 1962 and has held numerous marketing positions in the US. Mobbs joined in 1965, working in marketing management in the Far East and Europe until his promotion to UK managing director in 1981.

■ Colin Mattison (below) has joined Systems Resources, the Midlands-based software house, as sales executive. He previously spent four years with Panasophic Systems as a branch manager.

■ Top job changes at NCR and Memorex have brought new faces into senior positions in the UK. NCR UK has s new chairman and managing director in Frederick Newall, while at Memorex International Lars Turndal has taken over from manager of the year Reto Braun, who has left to join Gene Amdahl at his supercomputer firm, Tritogy.

Newall takes over from Rex Fleet, who has gone to NCR's US headquarters as financial systems vice-president after over five years in the top UK job. A spokesman said that as with other big companies it was NCR policy to move senior people around every three or five years. This did not mean such moves were promotions or demotions.

■ Versatec, the $100 million subsidiary of the Xerox Corporation, has appointed Tony Dodd as managing director of its UK arm Versatec Electronics. He was previously operations director with a test equipment manufacturer.

■ Data Dynamics' new marketing services manager is Richard Steggall (right). He was formerly general manager at Racal systems. Pictured with him is Pat Raec, one of the company's most successful salesmen, who has been promoted to southern area sales manager from sales supervisor.

John Weatherhead, Nick Harding and Terry Watson (above) have all relinquished senior posts with Rapid Recall to start their own company, called Reflex. It will specialise in video data projection terminals and high quality colour monitors. Reflex begins life with one franchise — that of Electrohome, a Canadian firm, whose ECM 1302 colour monitor is available for the first time in the UK through Reflex. Sales and marketing manager Weatherhead was formerly managing director at Rapid Recall. Harding, who is Reflex' financial director was Rapid Recall's financial director, and general manager of Rapid Terminals. Technical director Watson was previously Rapid Terminals' technical manager.

DIARY

APRIL 25

Structured analysis and design. IDPM Scottish branch. Strathclyde University Staff Club, Strathclyde. 7.30.

APRIL 26

Computing and database courses at the Open University. BCS Dundee branch. Dundee College of Technology. 7.15.

APRIL 27

Artificial intelligence in education. BCS Belfast branch. Maggee College, Belfast. 8.00.

MAY 2

Visit to Future Technology Ltd. BCS Glasgow microcomputer sub-group. Details from W. Jack on (041) 552 4400, ext 3615.

MAY 4

Computer revolution — when will it begin? Branch AGM. IDPM Central London branch. Aitergo, Imperial House, 15-19 Kingsway, London WC2. 6.00.

How to choose a micro. IDPM Sussex branch. Town Hall, Market Square, Horsham. 7.00.

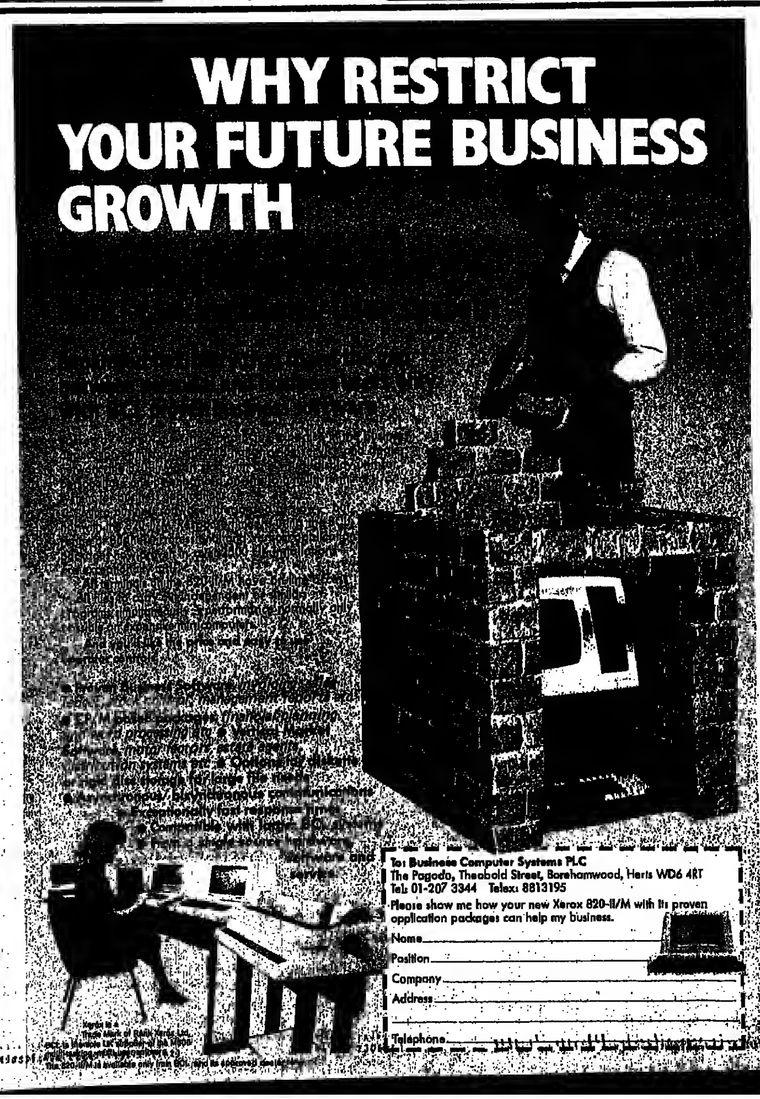
MAY 5

The work of the National Computer Centre. Branch AGM. IDPM Birmingham branch. New Imperial Hotel, Temple Street, Birmingham. 7.30.

CONFERENCES

■ ALPS, Automated Language Processing Systems, is one of three systems of machine translatioo used in Provo, Utah, US, and is about to be marketed in Europe. Lain Danik of ALPS is to address the BCS Natural Language Translation Specialist Group's next meeting on April 27 at King's College in London. Danik hopes to stage a demonstration of the method the following day at a site in London to be announced at the meeting. The meeting starts at 6.00 and all are welcome. Further details from Walter Goshawke, 68 Barrington Road, Bexleyheath, Kent DA7 4UW.

■ May Courses being held by Control Data include Computer Security, Auditing the Systems Development Life Cycle, Data Communications, and Networks and Datacommunications Overview. Computer Security, to be held from May 11-12, is aimed at anyone in data processing or systems auditing who need to be alerted to the serious risks and security problems associated with their work. The course aims to provide participants with the knowledge to design secure systems and operating environments. It covers the physical safety of the computer centre and the prevention and detection of fraud. Fee is £245 plus VAT. Auditing the Systems Development Life Cycle takes place from May 4-6 and costs £345+ VAT; Data Communications and Networks is set for May 17-19 and costs £345 + VAT; and Datacommunications Overview, to be held on May 24 costs £145 + VAT. All courses will be held in London. Details on 01-748 3444.



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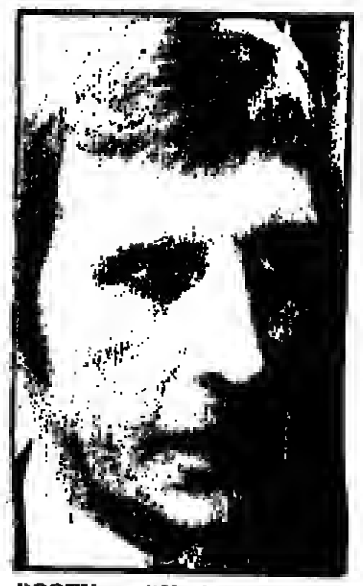
SOFTWARE MONTH

The 1970s honeymoon for database is over – and now is the time to sit back and take an objective view

Data – based on out-of-date principles



BOOTH . . . *"Hardware manufacturers use software to control their accounts."*

"DATABASE technology has always promised more than it has been oble to deliver. The high hopes and optimiatic predictions of the pioneers and pundits of the late 1960s and early 1970s have not been borne out in practice – at least, not yet." So begins the current Xephon User Survey, *Database in Practice*.

Despite the necessary caveats that preface this statement, warning that "The survey does not puport to be a statiatically valid profile of database usage. . . in general", it nevertheless strikes a sympathetic chord among all who have ever been tied into a large-scale database system.

The honeymoon for database, which really existed throughout the 1970s, is now over; and perhaps for the first time we are able to sit back and take an objective view of the situation.

The first and almost heretic discovery we make is that database is no longer the revolutionary concept we automatically assume it to be. In fact, many of its fundamentala are actually based on totally out-of-date principles. Cobol, for example, is a basic facet of Codasyl databases. And yet the basis of Cobol waa laid down at a time when IBM was still supplying vacuum tube computers.

Even Adabas, a system with an inherent leaning towards the curreotly in-vogue relational approach, and consequently considered one of the more modernistic of the databases, was nevertheless first devised in 1969.

The datahase has been around, largely unchanged, for upwards of 20 years.

No one would suggest that hardware bas remained unchanged over the last 20 years. Why, then, should this be so of software? Terry Booth, of Cincom Systems and Total fame, believes it is due to the auccess of the hardware manufacturers.

"Hardware manufacturers," he says succinctly, "use software to control their accounta." (If pushed, he will accept that software companies do exactly the same!) "IBM has always done it, and now even DEC has begun."

The principle is simple. A company's investment in applications software will soon far outstrip its investment in physical hardware. Thus, if a hardware manufacturer can persuade a customer to adopt its own software – software that will only run on the manufacturer's own hardware – that customer is unlikely ever to change to an alternative source.

Conversion costs for major databases can be quoted in millions of pounds; and with labour costs continuing to increase, this will only get worse.

The independent software suppliers do exactly the same. It is not in their interests for users to be able to change to an alternative source at the drop of a hat. Paradoxically, it is the very success of this ploy, using software to control accounts, that has created the monolithic database that is out of time with its own surrouodings. The cost of developing a new database is exorbitant: the cost of converting from one to another is prohibitive. So, even if the software suppliers could afford to develop new software, it is perhaps unlikely that they could get existing users to buy it.

> **Even if the software suppliers could afford to develop new software, it is perhaps unlikely that they could get existing users to buy it**

"Most mainframe users and even large-scale minicomputer users are already using individual database packages, and would not take kindly to the supplier who would either persuade them to change or threaten to abandon existing support. The paradox is clear: in trying to lock-in customers to their own products, database suppliers have also aucceeded in locking themselves in.

But as everybody knows, in a competitive market you must expand to survive. The quandary facing the database supplier is that much of the large-scale market is already saturated, and the greater part of the new small-scale market is going to the increasingly powerful microcomputer and the increasingly more successful micro database.

It should be remembered that the 32-bit Motorola 68000 microprocessor, now the favoured chip for the latest generation of micros, is as powerful as some of the earlier 360 mainframes; in other words, the modern micro is even more powerful than the mainframes that were around when database was first developed.

When these powerful micros are added to the potential of the local area network, it becomes clear that many poteotial new users never even consider mainframe databases. The result is that existing mainframe database auppliers are forced into ever more ingenious methods of maintaining and, if at all possible, increasing their user base. These methods are defining the future of database, for we can be certain that the techniques developed on mainframes today will be available on micros tomorrow.

As Clive Hutchinson, marketing director for Adabas Software Ltd (ASL) puts it: "The aim of any successful DBMS suppliers must now be to provide an integrated set of database and data communicating products. Todsy, such a set must include productivity aids and end user facilities and, arguably, TP monitors."

He was, of course, thinking about his own company's integration of Adabas (database), its dictionary (Predict), and its communications language, Natural. What is missing is a high-level (perhaps it would be better defined as a "very high-level") query language. ASL accepts this, and admits to be working on it.

"Languages like Natural", says managing director Len Jenkinson, "will also provide the vehicle for even higher level languages for use by end users – not just for access, but also to update the database. Such languages will be devoid, as far as the user is concerned, of procedural logic and syntactical construction.

"In my opinion," he explained, "there are three categories of end user. The first category includes the type of person with little computing ability or experience and no desire to obtain any.

"The second category includes those people with no experience of computing, but a willingness to learn and the ability to be taught.

"Finally, the third category is that type of person with both ability within, and experience of, computing. This category usually includes engineers, chemists, physicists, accountants and other professionals who probably already have access to query languages, report writers, subsets of BD/DC languages, and so on.

"It is my experience," said Jenkinsoo, "that most end user offerings so far available only satisfy, or are suitable for this class of user. And if we are really honest, this type of user will get on with whatever facility is available, provided that it is seen by him as cost effective in terms of his time.

"The first category will probably never be able to formulate any sort of enquiry except those which are the basis of his own job. If his task is aided by a computer, it will almost certainly be via a purpose written transaction through the DP department.

"The second category" – the category which, incidentally, he believes to contain the vast majority of end users – has very few special productivity tools". But with schools taking computing more seriously, this is the category growing at the fastest rate.

"I conclude," says Jenkinson, "that the software industry has to turn its attention very seriously to this type of end user. He represents over half the user population, and his ability (although perhaps

■ Continued on page 19

JENKINSON . . . *"Relational databases very much in vogue."*

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SOFTWARE MONTH

Horror stories of abortive expeditions

■ From page 18

limited individually), when viewed in total could be the most significant factor in seeing DP through the next two years."

And the way to sddress "this type of end user" is via the combination of query languages and relational databases. "Relational databases", continued Jenkinson, "are very much in vogue at present and not without good reason. Their strength is in the flexibility they offer with respect to accessing the data.

"Since the exposition of the relational theory by Codd in the 1970s, it has been recognised that the relational approach leans more towards Adabas than other DBMSs. Adabas cao easily accommodate relational files."

As far as query language is concerned, "ASL is developing end user enquiry/update software which permits user staff with little knowledge or experience of data processing to access and update an Adabas database producing at the same time quite sophisticated Natural programs (but without the user having any knowledge of Natural). The result will be efficient programs without assistance from the DP department."

One of the best known, and for various reasons, controversial, of today's database query languages is IBM's SQL. Jenkinson, as a rival producer, clearly has his doubts. "With products anch as SQL, as far as I am aware, the user needs to know about the tables defined to the aystem and be able to geoerate oew tables using some form of relational algebra. Again, I believe such requirements are beyond the ability of many end users".

Nick Pollard, managing director of rival Applied Data Research, also has his doubts. It's almost as if something about SQL simply doesn't add up. "From a marketing viewpoint, SQL puts IBM in a somewhat awkward position because for the last dozen or so years they have been pushing IMS and DL/I as being the databases to implement, whereas at the same time they were harbouring in their midst the father of relational databases, Edgar Codd. They were thus in the position of wanting to promote SQL in terms of its end user query facilities but not to threaten in any way the existing IMS/DL1 user base. This paradox was resolved by promoting SQL primarily as a query language while playing down the fact that it hides an implementation of the relational model with full database facilities.

"The greatest strength of SQL", saya Pollard, "appears to be in the language syntax and its use in procedural programs as well as ad hoc queries. This reduces the learning curve of users, especially those who write both programs and queries."

But he also perceives two primary weaknesses. "First, the data must be extracted from other databases and placed in a different format before it can be accessed by SQL. This process takes extra people, time, disc space and computer resources to accomplish. It also requires complete duplication of the data and raises serious questions with regard to the currency of the data used by SQL.

POLLARD . . . *"One must wonder what the long-term impact is of a relational system built on artificial accessing techniques."*

> **There have been so many horror stories that describe abortive expeditions into database that only the larger organisations, with virtually unlimited resources, can afford the risk**

"If the data which has been extracted is then updated, it raises further questions about data integrity, and leads one to doubt the merit of the entire approach taken by IBM.

"The second major weakness about SQL is the mystery surrounding the database understructure – that is, the octual database management structure underneath SQL provided to manage the physical database. As far as one can determine from the published literature it is definitely not relational in nature. This deficiency will cause short-term problems with performance and flexibility when users begin to depend heavily on SQL for their major data processing functions.

"One must also wonder what the long-term impact is of a relational system built on artificial accessing techniques".

It is, of course, just such doubts raised by SQL, that lead to the continuing suapicion that IBM is planning a new relational database to replace IMS and DL/1, and that SQL is the intermediary tool that might be used to wean existing users away from the old system.

There is a further, or third, weakness of SQL. It would appear that it is unlikely to achieve sensible performance from anything less than a four-megabyte machine. And this, in turn, lends further credence to the criticism of relational systems in general that they require enormous amounts of computer resources.

John Winnington, manager of technical support services at MSA, has his own views on the ageing of database. "The days are gone," he says, "when an organisation will go database simply because it is there. Even companies with ao existing database policy, but a requirement for a new applications package, will now often ask themselves, which version shall we have – database or non-database?

"There have been so many horror stories," he continues, "that describe abortive expeditions into database that only the larger organisations with virtually unlimited resources, can afford the risk.

"Data Dictionary, for example, is a concept that has been blown around the DP field since the mid to late 'Seventies, but I fear the number of successful implementations can be counted on one hand.

"Successful database," he concludes, "should not be considered so much a product, as a concept."

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SOFTWARE MONTH

The way forward for database

Ease of use by unsophisticated end users is the trend

THE obvious way forward for database can be seen in the clear trend towards making it easier to use by the unsophisticated end-user. At the same time, the increasing power of the microcomputer means that many new users are not even considering mainframe or minicomputer database.

Ease of use can be obtained by three features: relational databases, high level query languages, and data dictionaries. Internally, the database is becoming ever more sophisticated; externally, the view seen by the user, is becoming ever more simple.

According to Alan Mayne, manager of the communications division at the NCC, "There are already a number of relational DBMSs available. In a relational system the data is viewed as a collection of simple tables. A table can represent a form or ledger in a manual system. This makes relational systems very easy to understand, so end users may use them directly. Their powerful query facilities allow data to be selected and extracted from tables. A number of tables may be combined or 'joined' just as you may cross-reference two forms.

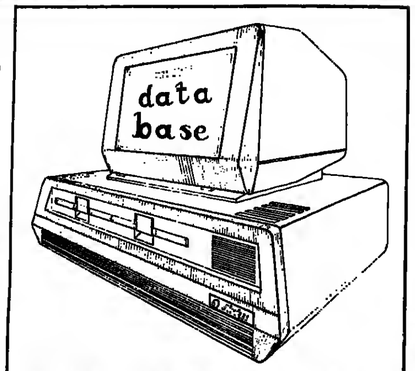
"Dictionary systems are valuable tools for documenting the organisation and the DP environment. In the future, more software products will be integrated with the dictionary. The dictionary will become the 'hub' of the wheel because it contains the basic data and the process definitions needed by other software. Information should only need to be collected, verified and stored once.

"The idea of database is now widely accepted. The data is held once (or repetition is controlled) and all application systems share this data. The same principle can be applied to processes. Instead of repeating validation rules and formulae in numerous applications, these rules can be held once and shared. This approach greatly reduces the effort needed to complete an application.

"Perhaps the end of the programmer is on the horizon, just as the age of the punch operator has passed its peak."

So are the days of the professional programmers limited? "In the software house or computer manufacturer," says Adabas managing director Len Jenkinson, "the answer must be 'no'; but in the commercial/scientific installation the answer may well be 'yes'."

But, as his marketing director Clive Hutchinson also points out: "Software is not, and never will be, a substitute for good management. Successful use of database depends not only on the ease of use of the selected database, but also on the degree of commitment, vision and applied common sense by DP management."



"There is no doubt that the microcomputer is about to offer a real database capability. The first relational database systems are already on the market and are accepted more readily than one might have dared hope".

Nick Pollard, managing director of ADR, agrees with this general trend. "The major emphasis in the direction of the ADR/Datacom system is towards end user query languages. Such languages must be available and provide ready access to data by anyone authorised to do so.

"All data must be accessible, and no pre-planning should be required; equally the data must be fully protected against unauthorised access. Unpre-planned access is impossible within embedded pointer systems, and that is why users of DL/1, Total and IDMS are forced to use other products to provide such facilities."

In some senses, this addition of query languages, dictionaries, directories and advanced report generators is rather like the *Daily Mirror* strip cartoon's Wellington selling Marlon a "go-faster" stripe, or a new set of oiled wheels – they may or may not make the thing go faster or smoother, but the basic buggy remains the same.

Manufacturers and software suppliers have been so successful in locking the customer into their own products, that it is now very difficult either to develop or sell a new large-scale product. And this means that the basic database structure no longer reflects the state of current hardware technology.

Terry Booth, UK general manager of Cincom Systems, believes that the producers of Total have found the way forward with TIS.

TIS (developed as a Total Information Service) has been rumoured for several years but has now been released and already has 40 sites worldwide, with a successful UK implementation at Leyland Parts.

It is a single directory (a dictionary plus) that protects the user from the physical database, and so prevents the user from becoming locked into a single hardware supplier. Because it sits between the user and the database, it becomes irrelevant to the user what the physical database looks like, or even which database it is. This makes it an ideal solution for the database user who wishes to relinquish his dependence on IMS without losing his existing investment in that database.

It is not just a conversion tool, for its main aim is not to poach customers away from IMS, but to allow those same users to use, say, Total, as well as, and transparently to, IMS.

But the important fact for the future, according to Booth, is that the "insulation from database that TIS facilitates is allowing Cincom to build a new DBMS (currently nicknamed Queen Ann) that will possibly be available later this year."

It is at the moment in the field on controlled release for final testing, and has, says Booth, "been specifically structured for high performance processing on the latest range of IBM mainframes, taking advantage of the new operating system and access facilities, and the new disc technologies."

No comment on the future of database would be complete without a look at microcomputer database. "There is no doubt," says Andrew Bytheway, technical services manager at F International, "that the microcomputer is about to offer a real database capability. The first relational database systems are already on the market, and are accepted more readily than one might have dared hope.

"The best of these include both interactive query and batch program facilities. It seems natural for the data dictionary concept to provide a working link between these new microcomputer packages and some of the system generators that can be expected in the future.

"The data dictionary will become no more than a staging point in the increasingly automated processes of system development."

It would appear that we can expect the new micro databases to learn rapidly from the mistakes and experiences of their larger cousins. And indeed, some are even designed to work hand-in-glove with them. Compsoft's new Delta system, interestingly described as "two-tier hierarchical – that is, a compromise between true relational and hierarchical", can pick up and use output from mainframe DBMSs provided only that the output is in sequential CP/M or MSDOS file format. This is of particular relevance to IBM installations, and will shortly be of similar importance to DEC installations as well.

"Some of the packages that are available," continued Bytheway, "are very friendly, elegantly constructed, and offered with a merry day or two of training. Whether novice users can get to grips with some of the concepts involved remains to be seen. Some of these concepts are already becoming quite sophisticated."

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Lisa is impressive – but a June release date is optimistic

David Ferris believes Apple's new system is not as ready as it seems

APPLE'S recently-announced personal computer, the Lisa, is an important machine which, at first sight, is hard to assess: the tightly controlled presentations cause people unfamiliar with the technology to feel somewhat awed and speechless.

To get a better feel for the product than is given by the sales presentations I accepted Apple's invitation to test a pre-release version. As a consultant, I have often been asked to review the state of products under development: and having now tested the Lisa, I am impressed with it. But the product isn't nearly as ready for market as Apple would have us believe – the scheduled UK release date of June 1983 looks optimistic.

Apple has decided, rather heroically, to go it alone software-wise, at least as far as the main general-purpose applications go. It has developed, or is developing, various programs for business users: a spread sheet (LisaCalc), a word processor (LisaWrite), a file manager (LisaList), a graphics processor (LisaGraph), a free-form drawing package (LisaDraw), a project planner (LisaProject) and a terminal emulation package (LisaTerminal). Some of these are eye-catching, and the desk-top context they are presented in enhances their attractiveness considerably.

Apple has put a great deal of effort into developing all this software, and the firm correctly describes the Lisa as a software machine. Much of the effort has been productive, because Lisa abounds in facilities unprecedented in the personal computer world. Thus LisaWrite has magnificent, typesetting quality word processing, and LisaProject lets the user manipulate network diagrams in the natural way, rather than via oblique references to numbered tasks.

The free-form drawing capability is so new to me that I have difficulty in assessing it, but it promises to be a boon to many applications.

So the good news is that Lisa is genuinely attractive. The bad news is that when you sit down and use the software, you find things are nothing like as rosy as the sales presentations suggest.

Apple is making a big thing about "pointing rather than typing", but typing is far preferable. Apple must have come to recognise this, because on many menus you notice it has been forced to include "Apple keys". These are nothing more than traditional control key sequences.

Apple's proprietary applications – LisaCalc et al – display excellent command consistency, and the windowing ability to view two or more applications concurrently is useful.

Further, the ability to interchange heterogeneous objects between applications (eg spread sheet to pie chart to free-form drawing) is far superior to existing integrated packages.

Nevertheless, the transfer of objects between applications (eg spread sheet to graphics) requires too much effort.

You still have to go through a process which parallels the traditional multi-step dumping of a file, loading the new application, and reading in the dumped file again.

So if you change your spread sheet, you still have to go through significant effort to reflect the changes in your bar or pie chart.

When you want to do a spread sheet replication (a common action) you are forced to go through a series of ungainly steps, and clutter your mind with extraneous notions such as cutting and pasting on to an intermediate clipboard. Anyone but the most novice of users will find it much easier to type in the normal kind of cryptic command string, eg "/R, return, A4.A15, return".

The main parts of the code are in place, but the remainder – the part required to bring it up to release quality – is not yet complete.

For example, the replicate command needs the spread sheet to scroll as you point to the replicate range – it doesn't, and you have to use an undocumented quick fix-up; LisaWrite has vertical scrolling using an elevator bar, but the horizontal elevator bar is missing; manual index references are erroneous; and bugs are easy to find – it's easy to run out of memory space when using the different applications.

Unfortunately, cleaning up these kinds of problem ends up taking vast amounts of development time, as many software houses have found to their chagrin. The software requires a lot of polishing to bring it up to release quality.

In addition to the final polishing issue, a lot of things users need and expect now are being left to (often distant) future releases. You can't use LisaList names and addresses for a LisaWrite mass-mailing; LisaList has no formatted screen data entry and query facilities; and in February the terminal emulation package was not even ready for bets test type demonstrations (as opposed to the sales presentations).

If you want to develop a turnkey system in Cobol, there's no formatted screen support package; no window, mouse, and menu support packages; and no shared database access for each user.

Apple has announced an optimistic release schedule within which is must bring Lisa to release quality.

The projected initial release date of June looks unattainable to me, because I don't see how they can have proper beta testing for all the software done in time.

To release as planned will, I believe, bring support nightmares for the firm.

Lisa's proprietary applications may be ready for restricted, controlled release by late summer, but I can't see a general release of the applications being wise until at least the end of 1983.

Similar reservations apply to further product announcements. In particular, the firm has correctly recognised the need for mainframe and inter-Lisa networking facilities, but is leaving itself a very short time to do the work.

Lisa is an important machine, but many users should treat the announcement in the IBM sense. To my mind, Apple has uttered a firm public statement that Lisa is in the works, rather than a happy cry of "on your dealer shelves next week".

David Ferris

David Ferris is an independent consultant with expertise in mainframe, mini, and micro software packages. He is also founder of Ferris Corporation, which provides personal computer support to the data processing departments of large organisations. He is based in San Francisco and London.

Lisa's high resolution screen can display all integrated software applications simultaneously. Shown here are (clockwise left to right): LisaGraph, LisaWrite and LisaCalc.

Lisa's attractions

SOME of the most notable of Lisa's features are:

Desk-top Model. When using Lisa, what you see on the VDU looks like a desk-top. You can view different worksheets from different applications at the same time, you can clear worksheets off the desk-top by putting them into folders, and can get rid of files by dropping them into a wastebasket. Those familiar with Xerox' Star computer – the first commercial offering of this desk-top interface – will recognise that Lisa derives directly from it.

Graphics. Lisa's powerful graphics capabilities have been used to good effect in enhancing common facilities. So the word processor offers many different kinds of font, and you can vary the size of characters – all this is done before you on the screen; the project planner lets you manipulate a task network diagram directly on the screen; and you can draw free-form on text or graphs.

Mouse. Lisa uses a simple hand-held device that you rub about on your desk to point to locations on the screen. In a conventional computer, you typically have to push cursor control keys to do this, and the mouse simplifies matters a lot. Lisa takes the mouse to heart, and most of the central applications programs all use it frequently. Apple sees this "point rather than type" philosophy as a major step forward in ergonomic design.

Application Integration. The current interest in integrated software suits Lisa well. The desk-top environment, and the applications provided with Lisa, have been designed to share the same commands and concepts. Thus you go through the same actions to save, delete, or transfer files, no matter what program you happen to be using. Further, things that are conceptually identical or similar (eg to delete a file, and delete a collection of data records; or to make a copy of a graph, replicate a spread sheet cell, and copy a block of text within a document) are done in identical or similar ways. The intent of this is to simplify the efforts in using the products: less learning time, greater ease of use.

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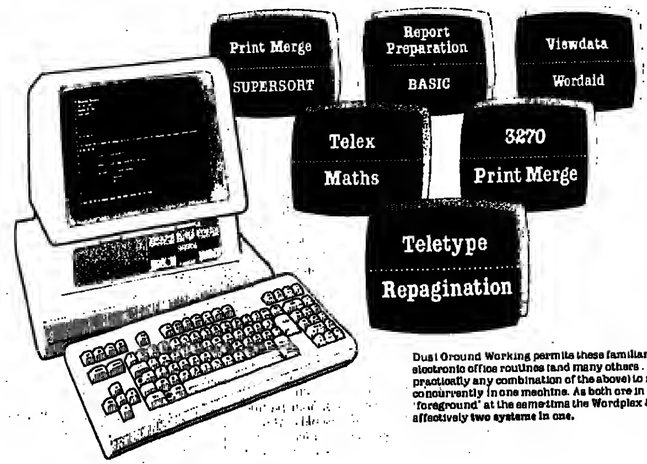

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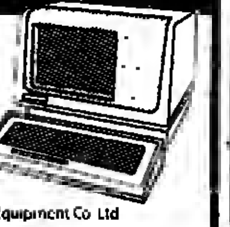

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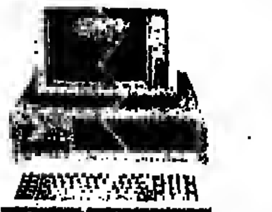

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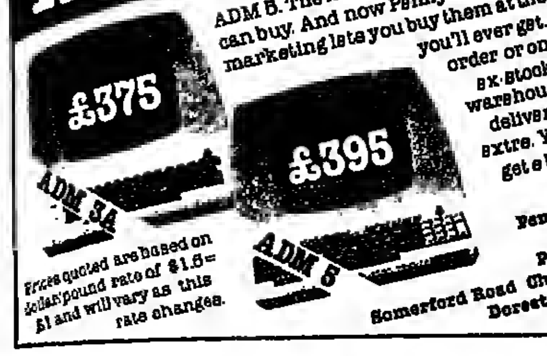

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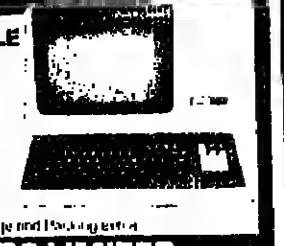

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Perfect way to keep data secure

Cryptography and Data Security. Dorothy Elizabeth Robling Denning. Addison Wesley Publishing Co. £12.50

PASSWORD security systems hsve, until recently, been considered edequatc protection for most computer installations exeept those in the area of defence. Heightened public awareness of systems storing confidential information and the inadequacy of the law with regard to data privacy snd protection are now forcing many commercial eoocerns to look at alternative methods of guarding their files.

Data encryption is a method of security that lends itself perfectly to a computer installation – performing algorithmie caleulations at high speed is what computers dn best – and it can easily be incorporated into I/0 routines.

Since the market for secure information systems is predieted to quadruple by 1986 in the US, according to a Frost & Sullivan report, there will also be a need for programmers in the UK to acquaint themselves with eneryption techniques.

Dorothy Denning's book is aimed at this type of readership and at getting the reader to "think" eryptography, regardless of the type nf cipher used. Sensibly, she ehooses to teach through lively use of diagrams, expressions and concepts that would be difficult to explain in words ond almost impossible for the atudent to visualise.

Given that the only type of eipher capable of aehieving perfect secrecy is one using a non-repeating random key stream for one message only, called a "one-time pad", the book sets out to demonstrate alternatives based on mathematical theories that could hardly be described as simple to crack.

After introdueing the reader to the coneepts of number theory, on which the majority of algorithms and eryptology techniques are based, the author goes on to explain the working of different types of cipher. These include homophonic substitution, polyalphabetic, polygram substitution, product, exponential, knapsack and block ciphers.

Considering the mathematical complexity of the topics the author has chosen to cover, she has produced a readable and informstive book.

Her enthusiasm is obvious throughout, and it is easy to imagine her playing the encryption games included in the book with her students at Purdue University.

Maggie McLening

"I just don't think we need security now we send the payroll by data-link".

History of the industry

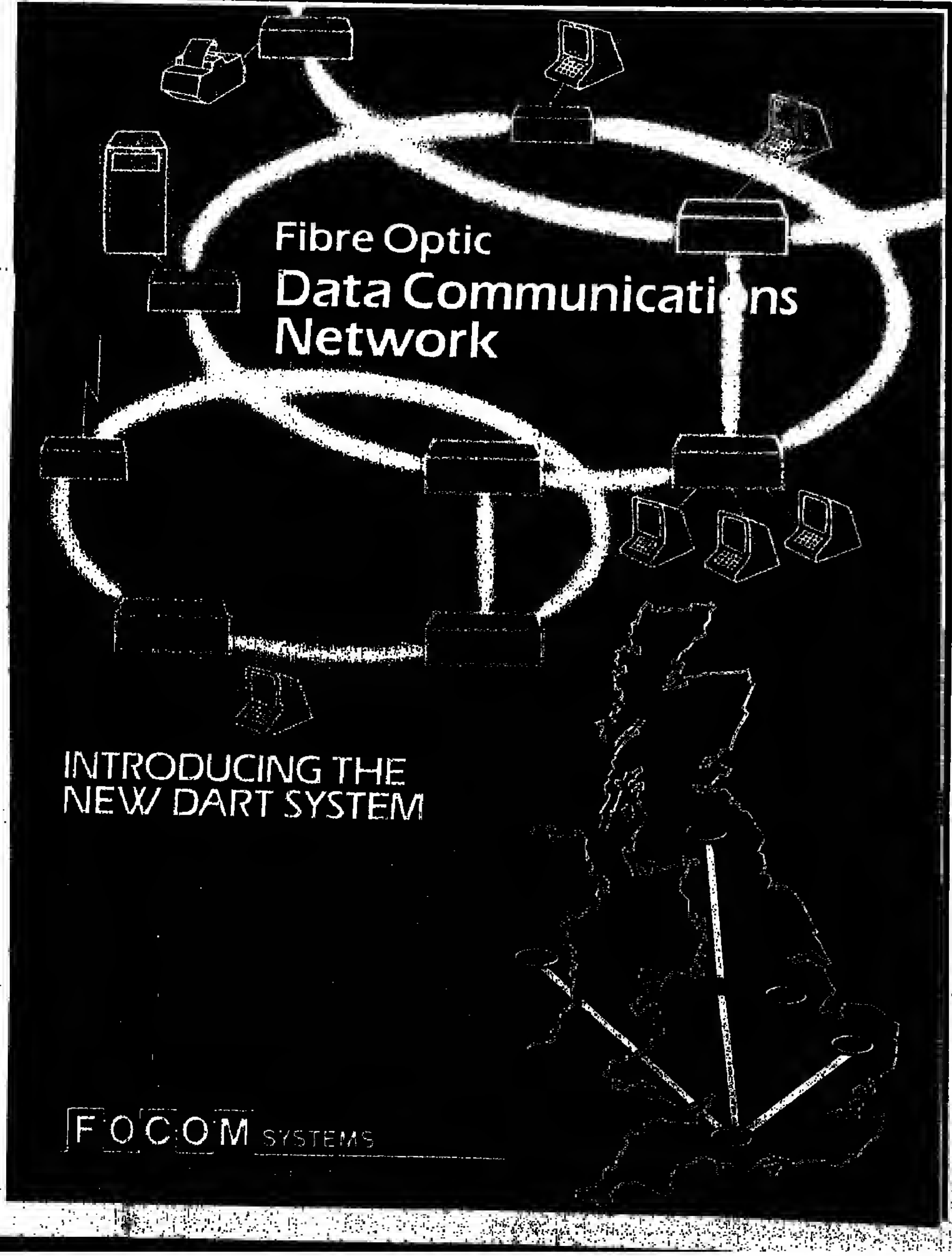
The Computer Estsblishment. Katherine Davis Fishman. New York: McGraw-Hill. Paperback. $7.95.

KATHERINE Davis Fishman, a New York writer, has laboured for 10 years to produce this work, which traces the history of the computer industry as a whole and some of the histories of the brightest stars in the computer universe. Her labour hss paid off, since she has produced one of the most readable, informative, entertaining books yet written on the subject.

Anyone who works with computers, buys them, or is affected by computers – which is to say, everyone not living on a desert island – will benefit from reading the book.

Fishman was fortunate in having access to many of the key players in the industry – among them, and uncharacteristically, IBMers. She hss produced a work that often sounds like a first-rate adventure novel.

Howard Karten



Making processors more friendly to human beings

The Intimata Machine. Neil Frude. Century Publishing. £9.95.

DR FRUDE'S wide-ranging study examines a number of ways of encountering the inanimate and speculates on the possibility of relationships between men and machines. To speak of the computer as a "social intimate" able to generate its own presence is not, he contends, whimsical. *The Intimate Machine* explores a range of attitudes from the biological chauvinism which insists on the intrinsic absurdity of the notion of an electronic personality to the anthropomorphic description of chip technology in terms of "intent", "realisation" and "knowledge".

Arguing from the data of psychology and anthropology, Frude concludes that a principle of animism operates in sophisticated adults as well as children and primitive tribesmen. Animism is the universal tendency to interpret the world in human terms, to discern faces in rocks and clouds, to discover a ghost in every machine – whether soft or hard.

The problem, as the hacking fraternity has discovered, is not whether it is possible to become emotionally involved with a computer but whether excessive commitment to a box of circuits might result in de-socialisation: "feed back loops and Fast Fouriers have taken over from friendship and fun".

A number of investigative programs, medical and psychotherapeutic, have proved popular with patients. In a Glasgow hospital alcoholics admitted a 50% greater intake of alcohol when interviewed by a machine rather than a human consultant.

A specialist knowledge of dolls, puppets and other automata as well as an admiration for the animatronics of the Disney "imagineers" leads Frude to consider ways of making processors more friendly. Sections on the problems of robotic locomotion and such aspects of artificial intelligence as the comprehension and replication of human speech tend to produce paradoxes of the kind "there is more to visual perception than meets the eye".

Anecdotal in approach, this book is clearly intended for a non-specialist readership for whom it rehearses a brief history of the computer and some of the fundamentals of programming.

For the most part fluent, it is nevertheless capable of such monstrosities as "disambiguate".

John Melmoth

Take it or leave it approach to Basics

Implemanting Basics: How Basics Work. William and Patricia Payne. Reston/Prentice Hall, Paperback, £11.95

THE title contains the ugly word Basics twice, but the text itself does little to justify the plural. It should have been called Implementing Wang-style Basic, circa 1975, since it concentrates almost exclusively on one dialect at a particular stage in its development.

It is a worthy enough effort, allowing for its limitations.

The reader will find plenty of details about text atomisation (or "tokenising"), about storage of variables and arrays, about the use of stacks in evaluating expressions and controlling program execution, and much else besides; but there are very few indications that for most methods presented there exist alternative, sometimes preferable, ways of doing things.

The approach is very much take it or leave it.

Given the competition, such as Peter Brown's inspirational *Writing Interactive Compilers and Interpreters*, my advice would be to leave it.

The Basic user will not be greatly enlightened by knowing the nitty-gritty of a system he is unlikely to be using, while the would-be system implementor can find fuller converage of the options available elsewhere.

Now if it had been entitled Implementing Microsoft Basic (or even Basics), that would have been a different story . . .

Richard Forsyth

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PROGRAMMERS **BERKSHIRE**

Our client is a well established highly successful group of companies whose products are household names throughout the UK. As you would expect the committment to continued development of massive computerised systems is total and on-going and their D.P. centres are both multi-disciplined and well structured. To keep abreast of their development plans they are now looking to recruit Programmers to work on various project teams with the following skills:

SENIOR PROGRAMMERS
Should have at least 4 years COBOL experience utilising structured programming techniques with both CICS and DL/1 (or RAMIS).

PROGRAMMERS
There are also opportunities for programmers who have a sound IBM background in COBOL, with both the ability and desire to be trained in both CICS and DL/1.

● Starting salaries will be between £8 - £12,000 depending on experience, plus a generous and comprehensive benefits package which includes relocation. Ref: P187

PROGRAMMERS (At all levels) **SURREY**

Our client is one of the foremost organisations in the UK, whose interests are both diversified and International. Their D.P. department is involved in the simultaneous running of over 60 projects, the responsibility for which is divided between a small number of select teams. To increase the potential of these teams they are urgently looking to recruit programmers at varying levels of experience. Although with emphasis on COBOL or ASSEMBLER, CICS and DL1, the client will also consider other capable candidates — and will offer starting salaries up to £11,000 with a whole range of company benefits. Ref: P215

Care... (kări·n), v. *trans.* To turn (a ship) over on ... side for cleaning, caulking, or repairing; to clean, caulk, etc. Also *absol.* and *fig.* 2. *trans.* To cause (a ship) to heel over 1833. 3. *intr.* To incline to one side or tie over when sailing on a wind (said of a ship) 1763.

Career [– Fr. *carrière* – It. *carriera* – Pr. *carreira* :– Rom. **carraria* (sc. *via*) carriage-road, road, f. *carrus* CAR.] † 1. A race-course; the space within the barrier at a tournament. Also *transf.* –1751. † 2. Of a horse: A short gallop at full speed. Also a charge, encounter. –1764. Also *fig.* 3. Hence, A (swift) running, course, as of the sun or a star through the heavens. *abstr.* Full speed, impetus. 1534. Also *fig.* b. *Hawking.* A flight of the bird 1727. 4. A person's course or progress through life (or a distinct portion of life); so of a nation, a party, etc. [illegible] 1803.
2. Mortal combat or carreer with Lance MILT. *P.L.* I. 766. 3. The Sun ...

Bearing this simple but accurate definition in mind, **we have selected these four developing IBM installations.** For further details telephone our Recruitment division and ask to speak to one of our consultants.

SENIOR POSTS **CENTRAL LONDON**

One of the UK's most progressive financial institutions, a subsidiary of a large international banking group are currently at the development stage of several medium and large projects. As a result they are now urgently looking to recruit senior personnel who will play a major role within the development group, for which a good understanding of the following skills will be necessary.

ANALYSTS
A background with large financial or accounting applications is essential preferably utilising IBM Tandem mainframes.

PROJECT MANAGER
The ideal candidate must be able to demonstrate the ability to manage large project teams, utilising on-line techniques preferably in a financial or accounting environment.

● These senior positions will command a high starting salary depending on experience, and a benefits package you would expect from a large and successful company. Ref: P194.

MVS SOFTWARE SPECIALISTS **EUROPE/USA**

This inventive and expanding IBM Systems Software House have won several (ICP) awards for their software products. They are now looking to substantially increase their market share both in Europe and the USA. To achieve this they require top level MVS Systems Programmers to work in their product support teams:
Selected candidates will have the opportunity to work in the UK (Herts), Germany, or the USA, and can expect a starting salary of not less than £18,000. Ref: P213

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LONDON AND HOME COUNTIES

MAJOR INS. BROKERS
ANALYSIS AND DESIGN to £14,000
Genuine Analysis and/or System Design skills are required by this leading company. The environment is sophisticated IBM and candidates, apart from being self-motivated with good inter-personnel skills should have experience with ON-LINE and DATABASE systems using PL/1 on Cobol.

INTERNATIONAL BANK
PROGRAMMING to £11,500
Become involved in the development of a comprehensive new international banking system. Our clients offer unrivalled opportunities for bright, young Programmers with COBOL, DOS/VSE, CICS and/or DL/1 experience.

BANKING
ANALYST PROGRAMMER to £12,000
Depending on your experience, particularly on DEC-based BANKING systems, our client, an International City Bank, require your services. Programmers, who can demonstrate an understanding of BANKING or FINANCIAL applications with at least two years' experience, and the ability to encounter and learn new systems, should apply immediately. A comprehensive BENEFITS package and a pleasant work environment are just some of the points to consider.

INTERNATIONAL BANK
RPG PROGS./ANALYSTS to £13,000
This prestigious financial organisation require several people with a minimum of 18 months' RPG II experience. Preferably you would have gained this in a banking environment together with some exposure to analytical duties. Normal banking benefits apply after three months' qualifying period.

MAJOR OIL COMPANY
SENIOR ANALYST to £13,500
This company, the leader in its field, require an Analyst with proven supervisory skills, to lead a professional team working on On-Line COBOL and Database projects. Emphasis will be placed on analytical and user *liaison skills with every opportunity for further advancement.*

MAJOR MANUFACTURING CO.
HP PROGRAMMERS c. £10,000
Develop your programming skills towards an analytical role in a progressive On-Line environment with a company undergoing major new developments, planned into the mid-80s. Ideally you should have two years' solid COBOL programming experience with some exposure to HP utilities such as QUERY, VIEW, IMAGE or RAPID.

INTERNATIONAL SOFTWARE HOUSE
EUROPE & U.K. £12-25K
Our clients will train you in Consultancy techniques if you have 18 months' PL/1 experience coupled with an On-Line and Database background. You should be willing to work abroad, and ready to learn new programming methods, as training is always given.

ELECTRONICS
COBOL, BASIC+, +2 c. £9,500
A vacancy has arisen within a manufacturing firm for PROGRAMMERS or ANALYST PROGRAMMERS with a minimum of 18 months' experience. Knowledge of RSTS/E or VMS on VAX is desirable but just as important is the candidates' attitude towards RESPONSIBILITY as the post requires self-motivated and articulate individuals capable of dealing with USERS and able to work under a minimum of supervision.

LIFE ASSURANCE
PROGRAMMING & ANALYSIS to £13,000
This company, heavily committed to effective information processing and due to continual development, require further staff. IBM COBOL and On-Line experience, particularly if allied to team leadership, would be especially appropriate.

MANUFACTURING
SENIOR PROGRAMMERS to £10,000
Programmers or Analyst Programmers wishing to capitalise on a Solid COBOL background in a COMMERCIAL environment will find their skills rewarded in this well-known KENT-based company. Working both with ICL and HP hardware, this could be the next CAREER MOVE for candidates who feel their skills and talents are unrecognised in their present posts. There is plenty of room for expansion within this company.

INDUSTRIAL
PROJECT RESPONSIBILITY c. £11,000
Our clients are looking for Analysts with a flexible approach and three years' Analysis experience with On-Line/Database in an IBM environment. Effective communicators are needed for the development of Financial and Marketing Systems.

CONSTRUCTION
ANALYST PROGRAMMERS £ Neg.
ICL ME29 experience is a must. Our client is a well-known company currently seeking COBOL Analyst Programmers. They require mature and responsible individuals willing to undertake development work within a small group. You will need to demonstrate a good applications range and a minimum of three years' experience. A good BENEFITS package is offered in addition to a negotiable salary.

MIDLANDS

SOFTWARE HOUSE
PROGRAMMER/ANALYST c. £9,000
A Programmer/Analyst is required with good DEC PDP-/11 experience, probably using BASIC+ with the RSTS/E operating system. Experience in a software house, or project management in a manufacturing environment would be considered ideal.

MANUFACTURING SYSTEMS
ANALYST/PROGRAMMER c. £9,000
BASIC experience on any type of minicomputer is required by this thriving Systems house. Experience of writing bespoke packages, or in the manufacturing environment would be most suitable.

CONSULTANCY
OSO SYSTEMS £ Neg.
Do you have Programming or Analysis experience using RPG on a System 34, or 38, and wish to move into a consultancy role? Our clients offer the opportunity to obtain experience of the new IBM GSD machine, when it is released.

MAJOR INDUSTRIAL
ANALYST c. £9,000
If you are an experienced Analyst, with some programming ability, here is your opportunity to join a new division of an International Manufacturing Company. Our clients are looking for a key member of an exciting new project and can offer excellent scope for development.

TCR are always keen to hear from Systems and Programming staff with Commercial experience who are looking for a change of environment. Contact either office for an informal and confidential discussion.

TCR

Targa Computer Recruitment
6 Liverpool Street London EC2M 7NH Telephone 01-283 9941 Telex 25851
Monaco House Bristol Street Birmingham B5 7AS Telephone 021-622 2045 Telex 334237

(3337)

Our client, a leading International Bank, is seeking to recruit experienced and self-motivated professionals to work within the areas of Technical Services and Support. The technical environment consists of multiple 3033's and 3083's in their U.K. and European centres, linked to a worldwide network. Systems software includes VM/SP, MVS/SP and JES 2. The VM environment supports program development with CMS, Electronic Mail and Colour Graphics applications.

As a result of expansion within this busy and dynamic department, vacancies have been identified with four important areas.

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TECHNICAL ANALYST
Working within this challenging area, the successful candidate will be involved in the interface between applications development, systems programming and production areas, to ensure the successful evaluation, installation and support of advanced software products. Primarily these are usability and productivity aides including Electronic Mail, Operational Control Aids, Change and Problem Management and Computer Based Training, with new products planned for 1983.
Applicants must be able to offer technical support/systems programming background, with proven knowledge of VM and its interaction with MVS, JES,VM Pass-thru and RSCS. Also essential is experience of VM Exec language, and the use of VM/CMS as a development tool. It is anticipated that you will be able to install software packages, will be used to a high level of user liaison, and will be able to demonstrate report-writing abilities.

VM SYSTEMS PROGRAMMER
Suitable applicants should have a solid systems programming background, with a minimum of 12 months recent VM experience, preferably gained with a large user. You should be able to demonstrate a sound knowledge of VM internals, plus experience of de-bugging system dumps, performing system generations, problem solving and the applying of fixes. Knowledge of Assembler language and the ability to use CMS are prerequisites for this position within a highly-skilled team supporting VM for the European Data Centres in Croydon and Frankfurt.

TELEPROCESSING SUPPORT
Suitable candidates will have spent a minimum of 12 months within an IBM Systems Programming environment. It is anticipated that you will be aware of the functions of a large T.P. Network, with knowledge of such products as NCCF and NPDA being a further advantage. Some experience of programming is necessary, particularly Assembler or CMS, but more importantly you will have the drive and enthusiasm to indentify and resolve the technical problems generated by a network of IBM based terminals distributed throughout Europe.

CAPACITY PLANNING
A requirement has just been identified within our client's Capacity Planning section. A broad knowledge of IBM software is required, with experience of at least one high-level language. Experience of SAS would be ideal, but training will be given where necessary. The job will involve a high level of information gathering/reporting, and is an excellent opportunity to enter this varied and interesting field.

For an early interview please call **Andy Beacham on 01-734 7394** (office hours) or **01-223 8507** (evenings and weekends).

WARWICK WOODWARD A SPAN GROUP COMPANY
43-44 GREAT WINDMILL STREET, LONDON W1V 7PA
TELEPHONE 01-734 7394 24 HOUR ANSWERPHONE

(3327)

LOOK TO THE FUTURE WITH

BL Systems Limited is a highly successful, independent Systems Company, serving a rapidly expanding Client base, whose activities span the whole spectrum of industry, commerce and finance, including, of course, a large number of BL operating companies. The Company operates on an entirely autonomous basis, selling its products and services at competitive prices and covering a wide range of applications.

The Company's activities centre around premises in Redditch, Worcestershire, which include a large and impressively resourced Communications and Data Centre (CDC). Redditch is a newly developed area, south west of Birmingham, offering a quality, semi-rural environment with reasonably priced housing and easy access to most parts of the country.

The CDC is a modern, purpose-built unit housing an IBM 3033 (16 mb), an Amdahl V7 (16 mb) and an IBM 4341 Model Group 2 (8 mb), which forms the hub of a highly sophisticated network, incorporating a dedicated private microwave network. Extensive use is made of DEC equipment ranging from the 20/20 mainframe, through a large number of VAX and PDP 11 Series minis, to the LSI 11 range of micros. In addition, a wide range of other hardware is used, including CMC, Data General and Wang, together with a variety of other micro computers.

Computer Integrated Manufacturing, Flexible Manufacturing Systems and other leading edge technologies are very much the trademark of BLSL. The network supports a range of high technology products and services with their own dedicated mini computers including VIEWSHARE, a private Viewdata service, COMET, an electronic mail service, COSMIC, a timesharing service, based on ADP on-site, and ARTEMIS, the project management system from Metier.

Plans to further expand the Company's market penetration have created the following vacancies:

Telecommunications Network Planner – c £12,000 plus lease car

This position calls for the services of a specialist in telecommunications planning. The ideal applicant will have a number of years practical experience of the planning and implementation of data communication networks, incorporating both IBM and DEC hardware.

Main duties will include capacity planning and the design of new configurations within BLSL's package switching network, cost-justifying proposals and liaising closely with BLSL's Clients, the Company's Operations Section and indeed the Marketing Department in the technical qualification of new business prospects.

This senior technical consultancy position will involve a certain amount of pre-sales activity, and once the Client has accepted the proposals, will include the design and co-ordination of the implementation of communications links between the customer and the central BLSL computing resource.

A certain amount of travel, occasionally to Europe, may be necessary.

Hardware Facilities Planner – c £12,000 plus lease car

This is an excellent opportunity for an accomplished IBM Hardware Technician to join a small, highly skilled Computing and Consultancy Group, engaged in the forward planning of hardware requirements within the BLSL timesharing network.

It requires practical experience of interfacing minis and micros in the field to large scale IBM mainframe installations where knowledge of the various communications protocols and CCITT are highly desirable.

The position will involve a certain amount of Client contact, examining the Client's current and planned configurations and proposing methods of creating interfaces between such configurations and the central BLSL computing resource, with the main aim being to continually expand the services provided by the Company.

A certain amount of travel within the UK may be necessary.

Both of these positions are integral in BLSL's ongoing strategy of expansion and offer a high degree of variety and challenge. Terms and conditions of employment associated with these positions are excellent and include a low cost leased car, bonus system and 25 days holiday, together with an attractive relocation package where applicable.

For further details of these positions, please contact **Ian Payne** on **021-236 3781** (24 hour answering service) or at home on 0827 58002 (evenings and weekends until 9.00 pm). Alternatively, please forward a detailed c.v. to him at the Birmingham office.

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NORTH: International House, 84 Deansgate, Manchester M3 2ER, 061-833 0427
BELGIUM: Avenue Louise 327, Boite 4, 1050 Bruxelles, 010 322-640 7151/71
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(3316)

AMERICA UK EUROPE

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With expansion in the U.K., Europe and America, we need PROGRAMMERS and ANALYSTS with good IBM System/38 experience to work in our various offices on in-house projects, or alternatively bespoke work in client premises.

As one of the market leaders in the System/38 field we can offer you a highly rewardable career opportunity.

For further details contact:
Ray Slattery,
DATASENSE LIMITED, Blue Line House,
Angel Road, Edmonton, London N18 3BJ.
Telephone 01-803 8618.

(3284)

datasense

LINK ASSOCIATES is an IBM SOFTWARE HOUSE

We specialise in developing bespoke systems on IBM mainframes. We are looking for more Programmers, Senior Programmers and Analyst/Programmers with at least 3 years' experience of this environment.

We can offer: Lucrative Career Opportunities
Quality Work with Reputable Clients
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Quarterly increases

If you have: COBOL or PL/1 with at least one of the following:
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IMS DC, SHADOW, CICS

If you live within a 40-mile radius of Central London and are interested in joining a growing Software House

Please contact: Sheila Fox
Link Associates Limited
24a High Street, Chesham, Bucks. (0494) 784922

link

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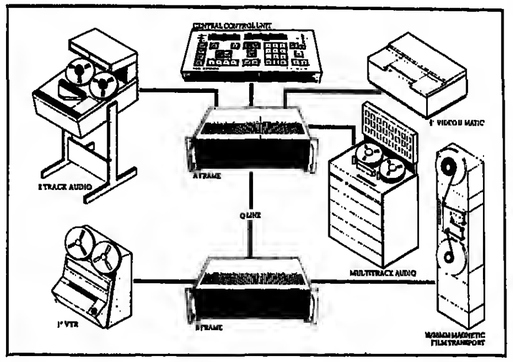
AUDIO KINETICS



Senior Design Engineers/Programmers
c £14,000

Design Engineers/Programmers
to £12,000

Borehamwood, Hertfordshire

AUDIO KINETICS is a young and dynamic company who have already taken the Video, Audio and Film industries to new levels of production excellence with their impressive Q.LOCK synchroniser. New enhancements and development work is planned on this device and, in addition, an entirely new system is in progress.

Ideally two types of engineers are sought, one with a bias toward digital hardware design, servomechanisms and control systems, the other with a strong software background including ASSEMBLER and PASCAL and, ideally, MDOS, CP/M, OS9 or UNIX. The Motorola 6800 and 6809 micros are currently being used so this experience is very desirable.

A background from the audio, video or film tape recording business would be perfect. However, applicants from the machine/process control industry would be suitable, particularly if work has incorporated ICE techniques and multiprocessor networks. The environment is one of Research and Development, so a preference for this type of 'atmosphere' will be satisfied.

There will be the opportunity for foreign travel to the company's Hollywood subsidiary and customers' sites worldwide.

Contact David Wallder CW63

(3346)

Modus Consultants are in London every Tuesday & Thursday - come and meet us

FTB

Industrial Control Systems

Berkshire

Our client, a leading manufacturer of Industrial Control Systems is currently undergoing a major expansion into new market areas and this activity has created a number of key positions within the company.

Successful applicants will be involved in a number of projects leading to the development of a new generation of Control Systems which will reinforce the client's current market strength.

Software Engineering Manager
Negotiable to £16,000

Previous software management experience in Process Control or a related field is an essential qualification to enable the successful applicant to lead a high powered team of experienced engineers.

Systems Design Engineers
Negotiable to £14,000

Experienced Systems Designers with a background in PDP-11 series mini-computers and with particular knowledge of RSX-11M and/or VMS operating systems are required. An understanding of Macro-Assembler and Fortran programming languages would be an added advantage. It is anticipated that suitable candidates will be graduates with at least four years experience in systems design.

For both positions some short duration business trips will be necessary. The competitive remuneration packages include a contributory pension scheme and free BUPA.

Please contact: Jim Wallis.

Ferguson Thorley Bowles Associates Limited
International Personnel Consultants
15 Clarence Street, Staines, Middlesex TW18 4SU
Telephone: Staines (0784) 59247. Telex: 8814148

CONTRACTS

IBM SYSTEM 34 RPG II	ANALYST/PROGS.	LONDON
IBM COBOL IMS DB/DC	ANALYST/PROGS.	SURREY
A.D.F.	PROGRAMMERS	SURREY
IBM COBOL IMS DB DL/1	ANALYST/PROGS.	SURREY
DEC DIBOL CTS 300	ANALYST/PROGS.	KENT
IBM PL1 IMS DB/DC	ANALYST/PROGS.	LONDON
IBM PL1 IMS DB/DC	ANALYST/PROGS.	MIDDLE EAST

For further details contact NIC POLAND TLP

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Now two years old, the DMW Group Europe has achieved a unique position in the market place, The Products Division supports INFORMATION ENGINEERING, the complete systems development methodology, with their products; responsible for research and development, marketing and the implementation of Fourth Generation tools throughout the world. Our initial management team is in place. We can now offer excellent career opportunities for people with the right skills.

PRODUCT SUPPORT

CONSULTANT £12,000-£15,000 - CAR - BONUS
The Product Support Department is responsible for the pre- and post-sales support tasks of demonstrations, training and customer advice. As a new department it must also produce quality documentation, course and seminar material, and expand to provide product installations.

The individual capable of meeting this variety of requirements must have a sound IBM technical background (including programming and analysis); be an effective communicator; and understand business and user needs. The successful candidate will be interested in fourth generation language products.

PRODUCT DEVELOPMENT

The Product Development Department is responsible for the enhancement, design and development of DMW's Fourth Generation language products. These individuals will be involved in the development of advanced features, new versions and will form part of our highly skilled team.

SYSTEM SOFTWARE ENGINEER UP TO £16,000 pa
The successful candidate will have at least 4 years experience of IBM systems programming or product development in ASSEMBLER. Knowledge of MVS, OS, experience of DLI, CICS or IMS/DC and an interest in the development of fourth generation technology is necessary.

PROJECT LEADER UP TO £14,000 pa
The individual will have had at least 4 years computing experience in an IBM environment developing systems in Cobol or PL1. Systems/data analysis and team leading would be an advantage. He/she will be responsible for development projects involving a specialist team working on advanced features and versions of our products.

ANALYST/PROGRAMMERS UP TO £12,000 pa
Will have at least 3 years experience of IBM system development on Cobol or PL/1. To work in a small professional team involved in product development and fourth generation language application.

THIS COULD BE YOUR OPPORTUNITY TO INFLUENCE THE PRODUCTS REQUIRED TO MAKE EFFECTIVE USE OF FOURTH GENERATION TECHNOLOGY.

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Please send your resume to: Maryjo Scrivani
Product Support Manager, The DMW Group Europe
Spa House, 11-17 Worple Road, London SW19 4JS
Telephone: 01 946 9109

(3339)

SYSTEMS SOFTWARE DEVELOPMENT

Yorkshire — **Up to £20K+Relocation**

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The recent opening of our prestigious new headquarters/manufacturing facility is now about to take Systime to even greater heights. As part of this planned development we are dramatically strengthening our Software Development Department and now have openings for a number of highly experienced people.

Communications Products–Software Engineers

We intend not only to maintain our strength in this area but also to build and extend it rapidly. We therefore need a number of people with experience in one or more of the following areas:-

- VAX VMS SYSTEMS PROGRAMMING
- INTEL 8086 SYSTEMS PROGRAMMING
- LOCAL AREA NETWORKS
- IBM SNA NETWORKS ● X25 NETWORKS
- COMMUNICATIONS HARDWARE
- DISTRIBUTED SYSTEMS

These positions call for proven ability at various levels as work will be of a highly technical nature, with some of the positions demanding project leadership skills.

Project Leaders/Systems Designers

To work on operating systems for an advanced range of Intel based Microprocessor Systems.

Your experience should cover working on Microprocessor development and software development on complex products.

Office Products–Software Engineers

Software Engineers with several years experience, interested in working on either Word Processing or Office Automation Systems.

If you have been involved in the design and implementation of Word Processing systems and are familiar with Intel 8086 and PLM you could be the person to lead a small team of engineers specialising in this area.

Alternatively if you have an interest in Office Automation Systems, particularly in designing and implementing Electronic Mail Packages or Data Storage and Retrieval Systems and you have a sound knowledge of VAX VMS and PL/I or Intel 8086, you could equally be the person we seek.

Benefits

All of these positions carry very attractive salaries with a benefits package that includes a company bonus scheme and full relocation expenses, with the added advantage of some of the country's least expensive housing in one of the most picturesque areas.

If your experience matches any of our needs and you would like to work with the market leaders, please write with full personal and career details to: Personnel Department, Systime Limited, Millshaw Park, Leeds LS11 0LT, or call VIC MARCH or TONY DENSON on Leeds 702277.

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SENIOR PROGRAMMERS
(Four years' UNIVAC 1100 COBOL experience and 18 months' DMS or TIP or DPS)

PROGRAMMERS
(Two years' UNIVAC 1100 COBOL experience and six months' DMS or TIP or DPS)

FOR THE USA ONLY WE NEED:

A TELECON CONSULTANT

SYSTEMS PROGRAMMERS
(OS 1100 internals)

SYSTEMS PROGRAMMERS
(DMS)

If you qualify and can be available within the next three-four months, please contact:

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Telephone Chertsey (09328) 66812

(3278)

Help take IBM's Personal Computer a stage further

IBM United Kingdom International Products was recently set up to head the launch of the IBM Personal Computer into Europe. One of its main activities is the acquisition and publishing of software. We are now looking for more experienced men and women to join our software group, which is based in Feltham, Middlesex, with a small additional unit in South Hampshire.

Software Acquisition and Development

You'll join a team evaluating opportunities for IBM to acquire, publish and market software packages for the IBM Personal Computer. Your work will be extremely varied, covering a wide range of applications, and will involve close liaison with our companies in the US and Europe.

Ideally a graduate, you should have in-depth experience of a number of microcomputers and their software. Probably you will have been involved already in software selection or marketing and you will have worked extensively with end users of microcomputers and software development companies.

Writer/Editor for Software Publications

You will work on the preparation of hardware and software publications for the IBM Personal Computer. This will involve writing and preparing manuscripts and artwork, often to very demanding timescales. Some travel in the UK and Europe may be necessary.

You should be qualified to at least 'A' level English with a City & Guilds certificate in technical authorship. In addition, you should have a minimum of 5 years' experience in the computer industry. The ability to explain technical operations in clear English – often for first-time computer users – is essential.

In both instances we offer a good salary, commensurate with age and experience. Our generous benefits package includes free life assurance and BUPA scheme.

Please write enclosing brief career details to: Steve Ravenhill, Personnel Operations Manager, IBM United Kingdom Limited, PO Box 1, Rockware Avenue, Greenford, Middlesex, UB6 0DW. Please quote reference: CW/40991

IBM

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- £119 million invested in UK in 1982

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up to £14,000 p.a.

IAL Data Communications is involved in many areas of modern communications and has gained an international reputation for the design, development and supply of varied types of communications systems.

We are actively involved in the development of INTEGRATED COMMUNICATION CONTROL SYSTEMS (ICCS) serving a number of operational environments including Air Traffic Control Communications, Police/Emergency Services Command and Control Systems and Military Communication Systems.

Our ICCS are based on distributed micro-computer and PCM/TDM digitised speech techniques. These technologies are blended into a highly innovative design architecture which has become the world market leader in the field.

To support the continued development of our capabilities in Communication Technology we require a number of Professional Development Engineers plus Systems Applications Engineers. These appointments will be based at our new R&D facility near Basingstoke.

Microcomputer Development Engineers

Appointments are available for Senior Development Engineers and Development Engineers with proven ability. Applicants should possess a good degree or HND plus minimum of four years experience for senior appointments, two years for more junior roles. Your experience may include 8086/Z80/8051 Hardware and familiarity with structured software design techniques. Languages may include PL/Z, PLM, PASCAL and Assemblers. Additionally, experience covering DEC VAX/VMS, RMX80 and local area networking would be advantageous. Ref: K059/01.

Digital & Analogue Development Engineers

Appointments are available for Senior Development Engineers and Development Engineers with proven ability. Applicants should possess a good degree or HND plus minimum of four years experience for senior appointments, two years for more junior roles in the fields of digital and/or analogue hardware design. Your experience may include microcomputer hardware design (8080/Z80/8051), TTL/ECL/LSI/MOS digital design, analogue techniques, filters, line and telephone interfaces, power supplies and PCM digitised speech techniques. Ref: K059/02.

Systems Applications Engineers

In this role responsibilities will cover the system design activities associated with specific customer requirements. This will include the configuration of systems from both hardware and software modules starting from system proposal right through to commissioning and on site acceptance. You may also be involved in the development of Computer Aided System Design and support packages.

Applicants should be qualified either to degree or HND standard with a minimum of two years systems experience. Appropriate experience areas would include communications switching systems, processor controlled telephone systems, mobile radio systems, computer based process control systems. General experience in micro/mini-computer systems and circuit design familiarity would also be advantageous. Ref: K059/03.

For all the above appointments please send detailed cv, or telephone Ian Gregory, Senior Recruitment Officer, IAL, Aeradio House, Hayes Road, Southall, Middx., UB2 5NJ. Tel: 01-574 5134. Please quote appropriate reference.

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Applications are invited for four University Lecturerships in Computation, tenable from 1st October, 1983. These appointments will be made under the University Grants Committee's scheme for financing a number of additional Information Technology posts in universities.

It is intended that these appointments should be held in conjunction with a college fellowship.

Further particulars of the university lectureships, and of relevant college posts, may be obtained from: Professor C. A. R. Hoare, F.R.S., Oxford University Computing Laboratory, Programming Research Group, 8-11 Keble Road, Oxford OX1 3QD. Telephone Oxford (0865) 54141, to whom applications (ten typed copies, or one from overseas applicants) should be sent. (Separate application is not necessary for an associated college post). The closing date for the receipt of applications is 11th May, 1983.

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Assistant Data Processing Manager

South Coast

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A knowledge of PDP 11 running under RSTS/E, and programming in Basic+ is essential. Previous experience or knowledge of data communications and remote terminal operation would be a distinct advantage.

Our modern offices are located in a pleasant part of South Hampshire close to the attractions of the South Downs, Portsmouth and the coast, yet only 80 minutes from London.

A most attractive salary, reflecting the importance of this key post in the Company's future data processing strategy, will be offered to the candidate with the required experience and ability. Benefits include a generous pension scheme and assisted BUPA membership.

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IBM SYSTEM 34/38 MAAPICS	to £13K	Sussex

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Systems Designers/Progs

S. Home Counties: Salaries to £15K

A series of newly won contracts, gained by a rapidly expanding Systems and Software House, has given rise to a number of vacancies for Systems Designers. Ideally, applicants should be between 26 and 32 years old and hold at least one degree in Computer Science or a numerate subject. Industrial experience must have been gained in a real-time environment and candidates should have participated in the design and implementation of complex technical or systems software. Fluency in PASCAL, FORTRAN and an Assembler is essential, with preference being shown to those with knowledge of DEC or Modcomp hardware. As one Client's current projects include the design and development of communications networks, graphics and interactive terminal systems, experience in any of these fields will be welcomed. Ref: L/16/A

VAX/Fortran Programmers

Central London: Salaries to £12K

An International Publishing House has recently established a subsidiary to develop and market Information and Bibliographic Databases. The Company now has an immediate requirement for both Programmers and Designers to join its Headquarters organisation. Applicants, aged 23-30 years must hold a numerate degree and preferably a higher qualification in Information Science. All candidates must offer fluency in FORTRAN preferably gained in a real-time PDP-11 or VAX environment. Experience of information retrieval and file handling is of considerable advantage for certain positions whilst Designers should have participated in the design and implementation of an on-line database system. Ref: L/16/B

Recent Graduate? Interested in Comms?

Central London: Salaries to £10K + Benefits

A leading Systems House/Consultancy has retained Logistix to assist with the recruitment of several Designers and Programmers to form new project teams in the field of communications systems development. Projects are currently being undertaken for clients in the UK, France, Benelux and Switzerland, so opportunities for travel will arise. The applications involve the design of communication networks, network gateways, message switching systems and interfaces to Telelex. Clients range from large commercial organisations to communications service providers.

SOFTWARE DESIGNERS/PROGRAMMERS: With a good numerate degree and at least two years' experience in industry, you will ideally have some knowledge of a proprietary networking system, e.g. SNA or DECNET and communications protocols. You should have experience with block structured languages and, ideally, also an Assembler.

ORADUATE PROGRAMMERS: With a good numerate degree and at least six months' experience in industry, you will probably be making your first move. Some knowledge of communications would be useful but more important is a desire to gain experience in a technically demanding environment. Knowledge of a language such as PASCAL or 'C' is desirable.

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Technical Authors

Italy: Salaries to £11K + Overseas Allowance

An internationally renowned Systems and Software House is currently seeking additional Technical Authors for permanent career positions in Italy. Suitable applicants should have a good educational background and at least 18 months' experience in the design and writing of User documentation for either a software or hardware product. A good command of the English language is essential as is the ability to communicate with both technical and non-technical personnel. Applicants who have participated in the production of a manual for end-Users of an Office Automation System will be of particular interest to our Client and will attract a salary premium. Knowledge of Italian would be an advantage but it is not a pre-requisite for these positions. Ref: L/16/D

Real-Time Programmers

Central London: Salaries to £9.5K

A leading Systems House and Consultancy is currently seeking to recruit additional Real-Time Programmers for its Central London Head Office. Suitable candidates should hold a numerate degree and have at least 12 months' subsequent software programming experience in an industrial environment. Your programming skills should preferably include fluency in one or more of the following: PASCAL, C, FORTRAN, CORAL 66 or Assembler. Hardware experience is less important, but if you are currently working in a development role on PDP-11/VAX, Intel 8080/8 or Motorola 6800/68000 you will attract a salary premium. Opportunities for career development are excellent and depending on your background and career aspirations you will be considered for the areas of Communications, Process Control, Robotics or Defence. Ref: L/16/E

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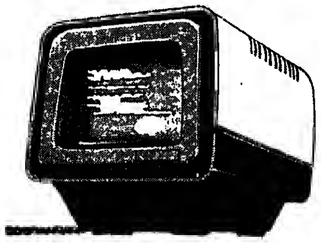

Although it may seem an obvious statement, technology – no matter how advanced – depends on the skills of the men and women involved in its development. That's why we at Gresham Lion place such a high value on the contribution made by our close-knit totally professional engineering teams; as lead contractor to MOD for sophisticated submarine weapon control systems, quality is all-important. Now we require additional Engineers aged 23-40 for junior and senior posts; take a look at the following career opportunities, which are located at our Feltham and Hook establishments.

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Richard Hancock, Gresham Lion Plc, Gresham House, Twickenham Road, Feltham, Middlesex. Tel. 01-894 5511. (Out of hours call 01-898 7177)

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(3304)

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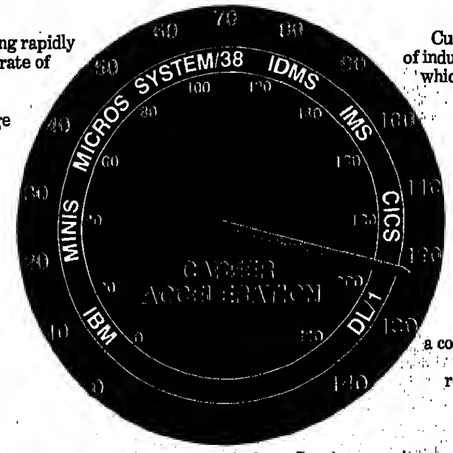

Currently they are providing users in a variety of industries with well designed computer systems which utilize both IBM and ICL mainframes and a variety of minis and micros. Database and t. p. software are extensively used e.g. IDMS, IMS, CICS, DL/1.

We are seeking to recruit a number of Programmers with at least 6 months ICL Cobol experience. You will initially work on a project based on ICL equipment, but will very rapidly be trained on other hardware and software.

Instrumental to the success and growth of the company has been its policy of providing a continuous program of career development for its staff with regular training and promotion reviews. Assistance with relocation expenses will be given where appropriate.

For more details, please telephone Andrew Cousins or write enclosing a full C.V.

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(3313)

Technical, Sales & Management Appointments

SCR

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021-236 3781

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International House, 84 Deansgate, Manchester M3 2ER
061-833 0427

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Our client, a major systems consultancy part of a Blue Chip group, is looking to recruit senior and junior Real Time, Process Control and Communications specialists to meet its current expansion needs.

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Ideally you will be a graduate with at least two years' related experience in a high or low level language (Fortran, Pascal, Coral, RTL2, Macro or Assembler) with potential to take advantage of the long term career opportunities available. Reference 6787.

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(3371)

Natural Opponent

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You may wonder why we use moths to illustrate an advertisement for MARCONI RADAR. Experiments have shown that some types of moth can detect the echo-location signals from predatory bats. If they sense danger they fold their wings and drop to the ground. Marconi's Radar systems have been developed to keep track of similarly elusive opponents. Continued development of their highly complex and sophisticated systems has brought Marconi Radar success in the highly competitive, high technology market of AIR DEFENCE, AIR TRAFFIC CONTROL and MARITIME radar applications.

Their success has been built, not only on the quality of the radar hardware itself, but also the ability of their designers to provide flexible solutions to the complex problems of handling the large volume of data from multiple sources, and presenting the results concisely, clearly, and in REAL TIME.

A growing order book means that Marconi Radar need additional, experienced software personnel at all levels.

CONSULTANTS CIRCA £14,500

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ANALYST PROGRAMMERS CIRCA £10,000

Experience of REAL TIME, ONLINE SYSTEMS is desirable. A flexible approach to problem solving and an open mind in seeking solutions are both essential.

Analyst Programmers will be involved in the analysis and design of modules of sub-systems and control the implementation of their design by programmers.

The more senior roles (Senior Analyst Programmer and Consultant) will become more involved in the management of the project or projects as well as liaison and negotiation with the Client. However they will be expected to retain a technical involvement and must be highly competent in this respect.

All staff members are actively encouraged to extend their knowledge and experience and to take on additional responsibilities, so that they can progress their career and make a larger contribution to the success of the Company's products.

The DATA SYSTEMS DIVISION, based in Chelmsford, comprises of over 200 software professionals and support staff, and operates its own bureau containing some fifteen machines. The Division has made a considerable investment in providing the facilities needed for development of the applications software and support packages necessary to meet the different requirements of Marconi Radar's many clients.

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You've got a sound programming background, and like working to good professional standards. For valid reasons, you are now considering a career move.

You may well be interested in an opening which offers:

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Acting for clienta, we are looking for competent programmers with upwards of two years' high-level experience. COBOL is the main language used, nnd preference will be given to candidates with good COBOL knowledge. However, tbe main requirement is for sound programming experience and ability, and if you have been using other high level languages, we would nevertheless like to hear from you, as our clients would be willing to retrain you.

Our clients have an extensive schedule of work on hond, thus there are openings at several levels. Please contact us by phone or letter quoting ref. 927 (messages recorded after hours) for enrly consideration.

(3336)

EDP SYSTEMS 01.637 5796
52-53 Margaret St. London W1N 7FF

Lion Systems Dovélopmenta, currently Britain's number one manufacturer of Data Communication Systems and products, are expending their oporation to include a brand new purpose built Headquarters, situated at the edge of the Chiltern Hills, adjacent to Junction 5 on the M40 in ths village of Stokenchurch

Sales Support Engineers

to assist the field sales force in the engineering aspects of our Systems and Products. Previous experience in the Oata Communications industry would be a definite advantage. There are excellent prospects for promotion to the external Sales Force. We offer a highly competitive salary, free BUPA membership (after qualifying period, generous holiday arrangements and an active Sports and Social Club. Find out more about these voluable career opportunities by contacting Moira Dale, Personnel Officer, Lion Systems Duvelopmente Ltd, Oxford Rond, Stokenchurch, High Wycombe, Bucks HP14 3SX. Tel: Radnege 3051.

(3367)

LION SYSTEMS DEVELOPMENTS LIMITED
Data Communication Products Systems Design and Manufacture

PROGRAMMER

Want to make our micros talk to mini's and mainframes?

Join us as a Programmer and we can promise you immediate involvement with microcomputers in a communications orientated computing environment which has the most up-to-date technology available.

Presently our micro hardwere le Olivetti TC 800 series and over 60 machines are installed in European rental stations. Plans exist for extensive advanced systems work, possibly involving a new range of micro-computers.

In the next phase of work you could be making our Olivetti's talk to minicomputers and to a Tandem NonStop II.

Opportunities exist for European travel and you will be working in a small team at a level that makes your contribution crucial. You will also, of course, be involved in maintaining existing, and new micro software.

Age is not important in this job – what we are looking for is around 18 months Assembler experience on any micro computer, and eagerness to base your career advancement on micro developments.

In return, we can offer a starting salary in the region of £8500, good promotion prospects, appropriate training and normal company benefits. You will also have the advantage of working in attractive new offices in the centre of Hounslow.

If you have the get-up-and-go you will need to set the pace with Hertz, send your full personal and career details to Mrs. R. Hales, Personnel Manager, Hertz Europe Limited, Hertz House, 700 Bath Road, Cranford, Middlesex, TW5 9TW.

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Your 12 Months + DOS/VSE Systems Programming Experience

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CIRCA £11K.

...can be put to good use in an installation which at present comprises a most sophisticated twin IBM 4341 configuration, soon to be upgraded to 3083, where on offer is a real opportunity to gain in-depth working knowledge of VSE, CICS/DL1, with VM/CMS, in an environment that is also developing advanced SNA capabilities.

Our Client is a prestigious Group Management Services Organisation supporting some 200 companies within the UK and Worldwide – based in South London their current computer facilities include: Twin IBM 4341, DOS/VSE, VM/CMS, CICS/DL1, VSAM, SNA (VTAM, NCP, 3 × 3705 ...), IBM System 34/38, IBM displaywriters, IBM personal computers ... The Company's policy is to be at the leading edge of new technology, and implement new releases of hardware and software as they become available.

The Technical Support Group comprises Software Support Manager and two Systems Programmers. The third and open position requires an individual to specialise in VSE (under VM), CICS and DL/1.

Depending upon your ability and experience to date, you may only need 12 months' experience of DOS/VSE systems programming with ASSEMBLER to apply. Additionally, prior exposure to CICS, DL/1 and VM will of course be to both your own and our Client's advantage, although comprehensive training will be provided as necessary.

Initial projects will include: In-depth investigation into CICS usage to enable tuning and performance monitoring; major system conversion to utilise DL/1; upgrading and support of around 20 other VSE products.

For further information or to arrange an initial interview please contact our Advising Consultant, **Ian Goldsmid** on **01-935 0671** during office hours, or 01-689 6367 some evenings and weekends, alternatively submit your Curriculum Vitae to the London address below.

(3314)

Technical, Sales & Management Appointments

ISR Specialist Computer Recruitment Ltd

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Local Area Networks

Reading

Racal-Milgo is a world leader in the field of Data Communications and has established an enviable reputation for the technical excellence and reliability of its products. This range of products has grown significantly over the past decade to cater for the ever-increasing needs of the Data Communications user, and is now probably the most comprehensive in the world.

The highly successful introduction of PLANET – Private Local Area Network both in Europe and America is leading to a substantial increase in the range and number of projects within our Systems Product Group.

In addition, major developments are taking place on modem and multiplexer techniques within our Modular Product Group.

As a result positions exist in Reading for Design and Development Engineers at all levels with an immediate need for specialists, both hardware and software, who have gained experience in any of the following areas:

- VLSI
- Micro & Mini Systems
- Media & R.F. Techniques
- Communication Protocols
- Information Storage & Control
- Network Command & Control
- Distributed Computing
- Signal Processing

Salaries will be commensurate with the diverse skills we seek – in a range up to £14K. In addition, the Company offers over five weeks annual holiday, contributory pension scheme and discounted private health insurance.

Generous relocation assistance will be offered where appropriate.

If you believe you possess the experience, skill and enthusiasm to contribute to this vital and expanding field of Information Technology and would like some additional technical background then call

Malcolm McConachie – Systems Development
or Chris Firth – Modular Development
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Alternatively, write to or call

Ian Melrose, Personnel Manager, Racal-Milgo Ltd, Landata House, Station Road, Hook, Hants.
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(3317)

To meet the increasing demand for their services, our client wishes to recruit two additional members for the data processing department, based in Hendon, on the North London/Hertfordshire border.

Programmer/Analyst to £11,000

If you have a solid ICL COBOL background, and some commercial systems experience gained from 3 or more years within D.P., then this is an ideal opportunity to take on the challenge of a supervisory role. Your duties will include deputising for the systems project leader, with responsibility for programmers and programmer/analysts, extensive user contact and a percentage of programming in COBOL.

Operator to £8,000

If you are fed up with working a night shift, this two (day/evening) shift system could be the answer.
You should have two years experience of ICL hardware, using VME/B and (although not essential) George III, plus a desire to use your skill to advance your career, either through technical support or programming.
Our client offers good working conditions, stability, full training in all areas (including day release courses) and a substantial range of benefits.

For further information please telephone **Barbara Basquill** on **01-734 7394** during working hours, or **0787-237116** evenings and weekends or send your C.V. to the address below.

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(3328)

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RSTS

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Reporting to the Technical Support Manager, working in the Central Software Support Department, at our prestigious new Headquarters, you will be responsible for providing telephone support to customers and our regional software personnel on RSTS and associated technical products.

Your other major areas of activity will include the discussion of technical matters, setting up of demonstrations and bench marks with potential customers, as well as providing an on-site technical consultancy service to existing customers.

Your background is likely to be in Systems Programming and Systems Management, with a knowledge of several packages operating under RSTS (eg. BASIC+2).

If this challenging and rewarding position appeals to you either write with full personal and career details to: Vic March, Personnel Department, Systime Computers Ltd., Millshaw Park, Leeds LS11 0LF, or telephone Vic March on Leeds (0532) 702277 for an application form.

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PE

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THE KELVIN LABORATORY
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COMPUTER SYSTEMS ENGINEER

The Laboratory has a vacancy for a person to work with the nuclear physics research group at the Laboratory in the preparation on on-line data collection systems for use both in the Laboratory and for experiments carried out at foreign laboratories. The work is varied and interesting, involving both hardware design and programming of the on-line computers, which at present comprises several DEC 11-23 systems. It will also be necessary for the person appointed to become familiar with the VAX 11-780 in the laboratory. Experience of one or more of these systems would, of course, be an advantage but applications will be welcome from candidates without such experience but demonstrating adaptability and willingness to learn.

Salary will be on either Range 1A (£6,375-£8,940), or Range 1B (£5,550-£8,085) on the scale for Research and Analogous staff, depending on age, qualifications and experience. Superannuation under the U.S.S. Scheme is also provided. The post is funded by the SERC on a "rolling grant".

Applications, detailing qualifications and experience (three referees) should be sent to Professor J. M. Reid, The Kelvin Laboratory, Department of Natural Philosophy, University of Glasgow, Glasgow G12 8QQ, by 30th April 1983 to whom further enquiries should be addressed. In reply please quote Ref. No. 4962P. (3364)

PROGRAMMERS

Required for the development of systems and should have experience in IBM, COBOL, CICS and OL/1. Ref 6025.

Required for new Honeywell installation of least two years' experience in COBOL, TDS, IDS II and Database. Ref 6034.

Our clients, based in South Hampshire, offer comprehensive terms and conditions of employment including relocation expenses where appropriate. Salary negotiable according to experience.

Please write giving full details to:

Tom Bartrum Technical Division, Tankarown Ltd (Agy.), 46 Leigh Road, Eastleigh, Hants. Tel: Eastleigh 6414244. (3349)

ITW LTD and its associated divisional companies manufacture a wide range of electronic packaging, industrial adhesives, metal and plastic fastener products for the domestic and overseas market. A vacancy has arisen for an

ANALYST/PROGRAMMER

within our small but go ahead D.P. department running an ICL 2946 computer that serves five locations throughout the South of England.

Based at our Featex Division at Basingstoke, we support a number of batch processing applications using RPG II. In addition we have developed a series of On-line applications for Sales order processing, purchase ledger and our sales ledger, utilising the Applications Manager programming language.

The successful applicant should have at least two years' ICL Software experience, must be self motivated and able to demonstrate a willingness and ability to cope with day-to-day problems as well as being able to accept the challenge of meeting project deadlines.

An attractive Salary commensurate with age and experience will be offered together with benefits associated with a successful company which is part of an international organisation.

Please write giving full career history together with details of current salary or telephone now for an application form to:-

Mrs Anne Pannell, Featex Division of ITW Ltd., Jays Close, Viables Estate, Basingstoke. Tel: 0256 61151

SENIOR ANALYST/ PROGRAMMER

DOS/ICCF/CICS EXPERIENCE

BAHRAIN £20,000 p.a. (Tax Free)

The General Organisation for Social Insurance has recently taken delivery of an IBM 4331 computer running under SSX/VSE.

A Senior Analyst/Programmer is required to lead a small team (4/5) Analyst/Programmers in the development of on-line applications using CICS with VSAM files. The Organisation has, during the last two years, developed a large database of information concerning insured workers on the island. This data is currently being maintained by batch application systems; the delivery of the IBM system will permit on-line access to the database in the first instance. It is planned to move to a database organisation together with on-line data entry, in parallel with the development of further application systems during the coming year.

The successful candidate should be educated to degree level and have an in-depth knowledge of CICS preferably gained in a DOS environment.

Reporting to the Computer Manager the Senior Analyst/Programmer would be expected to both supervise and train an experienced team of Analyst/Programmers in the effective use of CICS software.

An initial 1 year renewable contract would include free accommodation and five weeks' annual holiday together with a contract completion payment.

Applicants should write to the Computer Manager by 5th May in the first instance enclosing details of age, marital status, education, etc together with a brief history of career to date.

General Organisation for Social Insurance
P.O. Box 5319
Bahrain

(3362)

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New in this country, our U.S. client manufactures one of the most powerful and versatile 32-bit machines currently available. Demonstrating a revolutionary concept in computing, they are now building a team of engineers to support the demand for their exciting products. Opportunities now exist for experienced mini engineers who seek both hardware and software involvement with U.S. training.

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Please contact in the first instance, Sally Lawrence on 01-952 8092 (office hrs) or on 01-906 2617 between 6-8pm.

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COMPUTER OFFICER

DATABASE AND TEXT PROCESSING

Applications are invited from graduates with relevant academic, industrial or research experience for a post of Computer Officer within the User Services Group of the Centre. Candidates must have expertise in Database technology and a knowledge of text processing techniques would be a strong advantage.

Salary will be on either the Computer Officer IA or Computer Officer II scale, starting salary in the range of £5,880-£13,506, plus superannuation.

Further particulars from Mrs. J. E. Butler, Senate Registry, P.O. Box 363, Birmingham, B15 2TT, to whom applications (3 copies) including full curriculum vitae and naming three referees, should be sent by Friday, May 6th, 1983.

COMPUTER PROGRAMMER I.C.L. SYSTEMS 10 and 25

SALARY £8-10K

Sound Diffusion is a publicly quoted Group which is currently enjoying unprecedented growth graphically illustrated by a quadrupling of its share price in 1982 alone.

Expansion has now created the requirement for a programmer to work on established and new programmes for a Manufacturing and Sales orientated business.

The successful candidate will be 25+ and have a minimum of two years' experience using ASSEMBLER languages, preferably on the I.C.L. System 10 and 25.

The ability to work under pressure and to tight time schedules is of the utmost importance.

Please write with full c.v. to
Anne Kerr
Group Personnel Officer
Sound Diffusion PLC
Datum House
Ovaldor Road
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Sussex
BN3 1RZ

COMPUTER SCIENTIST

Through our subsidiary company, Robertson Research Engineering Services Limited, we have over the past few years established a leading position in geophysical borehole logging. This is the use of mobile computerised laboratories to record and evaluate formation properties found in exploration boreholes. We are now seeking to recruit a Graduate Computer Scientist to expand further our systems group and therefore facilitate the development of additional real time processing software both for use in the mobile units and at base. The ideal applicant will have a good degree in computer science and one or two years' experience in industry. A good knowledge of Pascal and Programming for Real Time Systems would be an advantage.

The position will attract a competitive salary together with a range of benefits appropriate to working with a large International consultancy and research contracting company.

Please apply to:

Mr. H. W. Pike, Personnel Manager
ROBERTSON RESEARCH INTERNATIONAL LIMITED
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Telephone: 0492 81811 (3360)

WELSH JOINT EDUCATION COMMITTEE
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COMPUTER OFFICER

(Salary £9,504-£11,184)
(Re-Advertisement)

Applications are invited for the post of COMPUTER OFFICER for the Computer Section of the Welsh Joint Education Committee. The Committee uses an ICL ME 29 running an on-line examination system and the person appointed will be responsible for managing, maintaining and enhancing the system.

The salary will be in the range of PO1/1 - PO1/2 (£9,504-£11,184) and the starting salary will depend upon experience. Applicants should preferably be graduates with experience in the following areas: recent systems analysis, programming in COBOL and working on an ICL ME29.

Further details and application forms (to be returned by May 14th, 1983) may be obtained from the Secretary, Welsh Joint Education Committee, 245 Western Avenue, Cardiff CF5 2YX.

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IBM COBOL, CICS, DL/1 – LONDON & HOME COUNTIES – ASAP
IBM OS/JCL COBOL CICS – SOUTH COAST – ASAP
IBM MVS CICS COBOL DL/1 – HOME COUNTIES – ASAP
IBM OS/VS1 PL/2 CICS – LONDON
COPICS IMPLEMENTORS – HERTS – ASAP
HP 3000 IMAGE COBOL – LONDON MAY
HP 3000 QUERY COBOL – LONDON – URGENT
DG MV6000 COBOL, TPMS, INFOS – LONDON – JUNE/JULY
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The Science and Engineering Research Council is currently reviewing its administrative computing requirements and expects to purchase a number of software packages to meet them. In connection with this the Daresbury Laboratory, one of the Council's major laboratories, situated in the North Cheshire countryside is seeking a programmer/analyst for the Applications Group of its Computer Systems and Electronics Division.

The Laboratory provides major facilities for scientific research undertaken by University research workers from this country and abroad. The computers at the Laboratory include NAS 7000, GEC 4000s, VAX and PDP 11s.

The successful applicant will assist in implementing the packages, in developing links between them and existing systems and in the provision of programming and database support.

The Applications Group supports a wide range of scientific and administrative databases on several different computers and opportunities to participate in these projects will arise.

Applicants (male or female), should have a good honours degree (or equivalent qualification) in an appropriate scientific discipline and a sound programming background. Experience in some aspect of database systems or package implementation, particularly on IBM computers, would be an advantage.

The appointment will be made at Scientific Officer or Higher Scientific Officer level depending on qualifications and experience. The salary ranges for SO/HSO are £5,422 – £7,389 and £6,840 – £9,126 per annum respectively.

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CLOSING DATE: 28th April 1983

For further information please write to or telephone Dr. M. Elder on Warrington (0925) 65000 Ext 350.

Application forms may be obtained from and should be returned quoting reference number DL/309 to:

The Personnel Officer
Science & Engineering Research Council
Daresbury Laboratory
Daresbury
Warrington
Cheshire WA4 4AD

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This position is temporary, for 12 months at this time.

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For further information please telephone the Data Processing Manager – 0983 524031, Ext. 262.

Application forms and job descriptions from the Personnel Section, County Hall, Newport, Isle of Wight (0983 524031), Ext. 127.

Closing date: May 5th.

Isle of Wight County Council

WARWICKSHIRE COUNTY COUNCIL
County Education Department

CENTRE MANAGER

North Warwickshire Information Technology Centre

The County Council is sponsoring an Information Technology Centre in Bedworth to serve the Northern area of Warwickshire as part of its programme for minimum age school-leavers within the Youth Training Scheme and applications are invited for appointment to the key post of Centre Manager. The Centre will offer up to 52 weeks foundation training in Information technology for 40 unemployed young people.

The appointment will, in the first instance, be for a period of 12 months but will be renewable by mutual agreement subject to satisfactory service and the continuation of the programme. Applicants should have experience in a supervisory or management position in the computing and/or electronics fields together with a knowledge of microcomputers. Experience of dealing with young people is essential. The person appointed will be responsible for setting up, developing and running the Centre. The salary for this position will be at a fixed point of £10,284 or £10,563 or £10,860 according to qualifications and experience.

Further details and application forms may be obtained from the County Education Officer (ref. SF/JF) 22 Northgate Street, Warwick CV34 4SR (Tel. Warwick 493431, ext. 2415).

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Progressive company requires senior person, with in-depth experience of HP1000, Fortran IVX, and Image and Query to spearhead major development project. Proof of database design and implementation, together with knowledge of real-time applications and telecommunications, is required. Only professionals capable of working with small dedicated team should apply. Salary by negotiation.

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Closing date: 5th May, 1983. (3330)

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For further information, and a discussion in the strictest confidence, please contact C. D. Stock, General Manager, IPS Group, Lloyds Avenue House, 6 Lloyds Avenue, London EC3N 3ES, telephone 01-481 8188.

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Applications stating personal details, qualifications, experience and the names and addresses of two referees must be received by the Borough Treasurer, P.O. Box 4, Town Hall, Blackpool, Lancs. FY1 1NA, by April 29th, 1983. (3320)

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(post no: A120)

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Whilst formal qualifications are not essential applicants who can show evidence of achievement in a disciplined academic, professional or technical capacity will receive favourable consideration.

Further details and application form, returnable by 6th May 1983, from Personnel & Training Officer, Clerk & Chief Executive's Department, Civic Centre, Carlisle CA3 8QG. Tel: Carlisle 23411 Ext: 283, quoting post no: A120. (3372)

BOX NUMBERS

Box number replies should be addressed to:

Box Number ....

c/o Computer Weekly
Quadrant House, The Quadrant
Sutton, Surrey SM2 5AS

A Step in the Right Direction

If you are thinking of a new job or you are on the lookout for an interesting contract assignment, you would do well to contact us. Allimand always has numerous permanent and freelance vacancies to fill on behalf of its clients who are primarily in the fields of banking, insurance and finance. We are keen to hear from anyone with programming or analytical experience who would like assistance in finding their next position, but specifically:-

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required with good VAX experience (approximately 2 years) for 2-3 years' assignment on ATCS. Candidates should be familiar with VAX standard utilities, possibly with PDP 11 background and be conversant with VMS utilities. Experience of system Software development and knowledge of Assembler.

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Candidates must have had experience of ICL and Racal products and be capable of fault diagnosis and rectification on the network. Experience of working with BT engineering services would also be useful.

This is an ideal opportunity for someone to join a relatively new venture with a forward thinking organisation.

Currently an alternating shift system covering the hours 0700-1900 Monday-Friday is in operation. The centre is based in Sheldon, Birmingham until late 1983 when a move to new premises in Monkspath, Solihull is due to be completed.

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This is a re-advertisement and previous candidates need not re-apply.

Application form, quoting Ref. IC 113 are available from the Regional Personnel Manager, Severn Trent Water Authority, Abelson House, 2297 Coventry Road, Sheldon, Birmingham B26 3PU.
Telephone 021-743 4222, ext. 2076/2077.
Closing date: 5th May 1983.
This post is open to both men and women.

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(£8,367 – £10,277)

PROGRAMMER/ANALYST

(£7,404 – £9,025)

Applications are invited for the above posts in the Computer Services Unit of the Highland Health Board.

The current workload covers financial, personnel, medical and nursing applications, and is run on an ICL 2904.

An exercise is currently being undertaken to determine a suitable replacement. It is anticipated that future developments will involve On-line Systems, Micro Computer applications and Database techniques, also a communications link to an ICL 2966 in Aberdeen is being established during 1984.

Applicants for the Senior Programmer/Analyst should have at least five years' Programming and Systems Analysis experience, and for the Programmer/Analyst at least two years' COBOL Programming experience. For both posts a knowledge of ICL and Software would be advantageous.

Application forms and further particulars may be obtained from the Personnel Officer, Highland Health Board, Reay House, 17 Old Edinburgh Road, Inverness, IV2 3HG, and should be returned not later than 6th May, 1983.

Deputy DPM
(Designate)

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Our Client is a multi-national, multi-million pound Group providing specialist, professional services to industry throughout the world. The Company has a prestigious Head Office complex in historic Stratford upon Avon where the Group computing resource is also based. The current configuration comprises a 3 mb IBM System 38 Model 7 running a wide range of on-line/database applications and supporting 25 local screens and 3 remote sites.

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HOLLAND Willemsparkweg 92, 1071 H.M. Amsterdam 010 3120-760947

Still a demand for software skills in the big DP departments

Commercial strength of area is good for computer staff, says Margaret Park

THE collapse of the UK's leading IBM software house has made even London software staff draw in breath and cast a cautious eye over the stability of the companies they work for.

The failure of a company like Altergo, which went into receivership soon after Easter through lack of cash and a huge overdraft, made even jobs in the so-called booming computer industry look less than completely secure.

But, for a change, in Altergo's case the recession wasn't at the root of the problem. Computer industry employers in London and Greater London have largely escaped that threat. Economic crises tend to hit the industrially weaker parts of the country first and the majority of workers in London and the South-east hardly know that such a crisis exists.

But if there haven't actually been mass redundancies among computer staff in the London area, recruitment has slowed noticeably, mostly because staff turnover has been reduced practically to a standstill.

Altergo had to face growing debts without any promise of cash injection. Business analysts poring over the bare bones of the stricken company have concluded that the cause of the crash was mis-management.

Most of the big manufacturing companies in Greater London who employ data processing staff obviously have the cash flow problem on their minds. One way of managing expenditure when revenue can't be guaranteed is to be very cautious about recruitment — people are an expensive asset.

As with other parts of the country, a contrast appears between the manufacturers in any industry who employ a data processing department and computer industry companies such as software and systems houses.

Jobs with computer manufacturers and software houses are still plentiful but companies outside the computer industry keeping a wary eye on the inroads of the recession have had to find ways of saving money. Data processing departments are almost always on the list of places in which the belt can be tightened, after advertising and graduate recruitment.

Kodak, for example, at Ruislip in Middlesex, says it hasn't recruited data processing staff for some time.

"People aren't leaving," said recruitment manager, John Harding. "We haven't taken anybody on for six months."

But a company like CMG (Computer Management Group) in Greenford which does a variety of data processing work is in a stronger trading position than some of the manufacturing industries and still recruits fairly steadily.

The chief systems analyst at CMG, Richard Summers, said that although staff turnover has slowed over the past year or so, the company is still taking on staff.

CMG is only interested in experienced staff and subscriber in the view that training computer staff is both expensive and risky.

"We don't take people without experience," said Summers. "It's pure commercial sense not to. Training is a very expensive pastime.

"The success of training is too dependent on the individual," Summers added.

Instead, CMG takes on a variety of expertise.

"At the lower end," said Summers, "we look for people with three to four years in commercial analysis or programming. And at the other end we may be after very experienced high level consultants with experience in excess of 10 years."

CMG is a traditional software house and consultancy which does development work on every size of machine including IBM, Burroughs and Honeywell. In a company like this, software staff think twice before they leave for unknown territories, with shock waves still reverberating from the Altergo crash.

Summers said that CMG's staff turnover is down and explained it as the result of the recession which makes people loth to leave jobs they think are secure.

British Telecom's Data Processing Executive in West Drayton is in the opposite camp on the contentious issue of training.

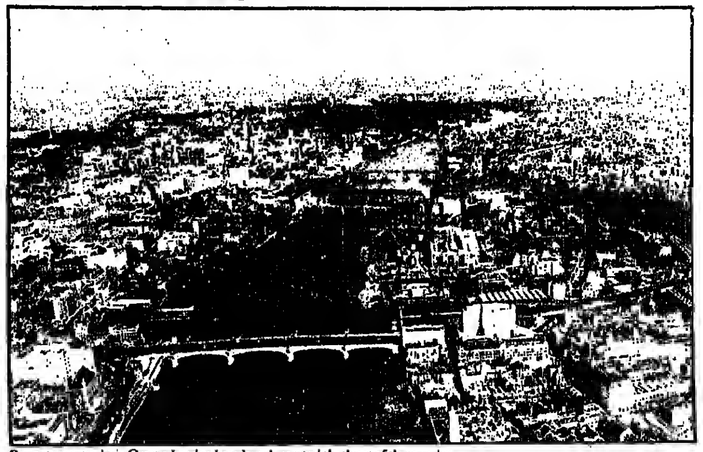
BT takes far more data processing staff as trainees than it does those with experience. One reason is probably the cost of buying expertise.

Most public sector employers (and BT is still public although the government is in the process of selling it off to the private sector) are limited in recruitment by cash shortages. Public sector spending is fiercely controlled by the government.

Local authority employers, for example, will always say they are prepared to train computer staff from scratch because they can't compete with the substantial salaries offered by private business to programmers and analysts with a couple of years' experience under their belts.

Job opportunities for computer staff are fairly plentiful in the Greater London area because although a certain amount of belt-tightening is going on, the industrial and commercial base of the region is still sound.

This means that for the big data processing departments, whether part of a manufacturing company or in a specialised computer firm, there is still a demand from outside customers for bureau facilities and software skills.



Computer companies in Greater London have largely escaped the threat of the recession.

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[3381]

SALES BIT

Quality of Management — 49

Sold on the efforts of a headhunter

I DO not accept "headhunting" as a convenient collective expression for the whole recruitment process. Rather I see it as a term devoted to the process of direct search — "bodysnatching", "piracy", call it what you will.

It is something quite apart from agency and advertising-based recruitment, where the process of candidate generation is to some degree passive, being dependent on the credibility and professional reputation of the advertiser and the persuasive capability of advertising and copywriting skill.

"Headhunting" is as far from agency and advertising based recruitment, as a mercenary is from civil defence — one takes, the other accepts.

Many companies are from time to time seduced by the simplistic efficiency of direct search (that's what they call it when you steal an employee from someone else!) You simply state the kind of person you want, the agency finds out where he is (usually working for one of your direct competitors!), and persuades him to come and talk to you about your opportunity of a lifetime. What could be more effective? What could be easier?

Unfortunately, you are not the only company with such a need, or considering such methods; your competitors are bound to be in the market, too.

So they go to an agency that specialises in "headhunting" (that's what it's called when someone steals one of your employees!), and guess whose company will be on the hit list?

The trouble is that today's client is almost unavoidably tomorrow's victim. This has to present a compromise that is difficult to resolve at the ethical level.

"Headhunting" salesmen is easy: you just contact the telephone operator of the appropriate branch of a relevant company in the right market sector and ask her. She is accustomed to people phoning with vague requests for product information and names of salespeople.

Managers are a different proposition. The more senior, the more aware they tend to be — or the more cynical, depending on your point of view.

Let's take what is, I hope, an objective look at some aspects of the "headhunting" process purely from the intending employer's point of view.

Perhaps you are desperate for salesmen: You have tried the agencies, you have advertised, but you just don't seem to be able to resolve your problem. So you consider using the services of a "bodysnatcher". It is reasonable to assume that any candidates put forward will have comprehensive direct experience with a track record of sales success, not only with your kind of product, but also within your marketplace — he will be a complete salesman.

If the "headhunter" is actively pursuing a job specification, rather than merely engaged in unpremeditated conversations with people who approach him, it would be unreasonable in the circumstances to be otherwise. So there is a considerable attraction in this process, for if it is successful it can produce salespeople from whom a more rapid return can be expected rather than from those with partial experience who tend to emanate from agencies and advertising.

Having said that, I believe some other rather subjective questions need to be asked. First, why should a salesman who is successful elsewhere, abandon all his established prospects and colleagues, to come and work for you for similar rewards? This is a very powerful question.

Then there is the attitude of the candidate himself. He didn't contact you, you approached him. Consequently, there is a considerable likelihood that he will develop the arrogance and demanding attitude of anyone who feels he is being pursued. He may feel a need to dictate the terms.

For a start, he will expect to get something special in order to justify the move.

And if a salesman is prepared to leave his present employer in the lurch "for a few dollars more", is there any less likelihood that he will leave you as readily as soon as some other company in need of an instant solution to a recruitment problem comes on the scene? The answer has to be No! Loyalty can often be to the detriment to the employee, but when this quality is cancelled out by avarice, it is dangerous for all concerned.

"Headhunting" managers? I have to admit I feel much more resolved to its necessity than with salespeople. If a company loses a senior manager or creates a new management post and has no suitable material internally, what else can it do? It's all very well making the valid criticism that it highlights the company's failure in personnel development, but that doesn't take away the problem. If a senior manager feels he is stagnating, or his position is in jeopardy, his external alternatives are extremely limited due to the numerical limitations of his level of job. In such circumstances, one of his limited range of possibilities is to make himself a passive target for those "headhunters" whom he knows to frequent his desired terrain.

In summary, all "headhunting" is not, in my opinion bad. The difficulty is deciding where the good leaves off. All one can do is consider the implications and alternatives in terms of the company, your existing employees, the prospective recruit(s) and not least, yourself.

Alan Williams

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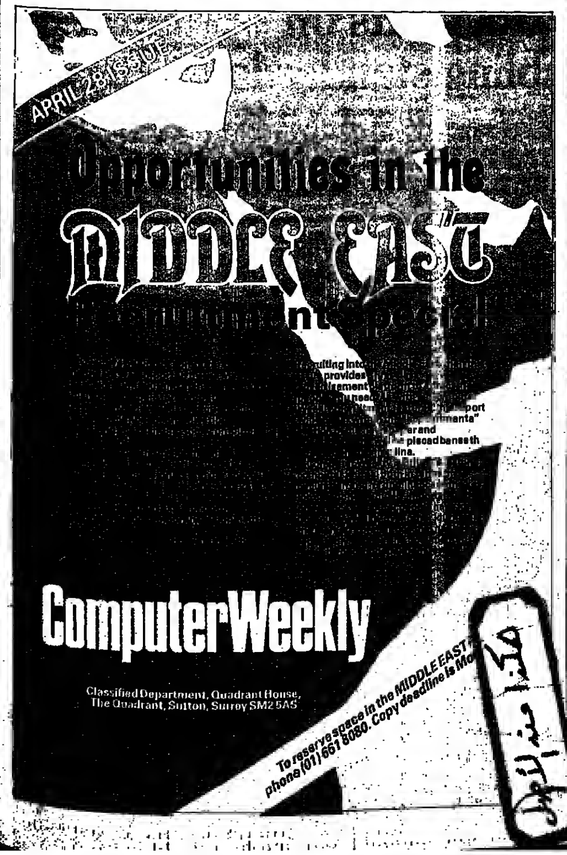

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